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ADVERTISING-RATES ON APPLICATION

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THE ARBOR
CHARLES K. ARCHER

PHOTO-ERA

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Methods of Advertising

C. H. CLAUDY

IF it were possible for you personally to address an audience of ten thousand people, all of whom you wanted to impress with the fact that you were a good photographer, that your pictures were unusual, and that they should patronize you rather than some one else, and if, in that address, you had but one minute to speak, what would you say? A newspaper advertisement must occupy considerable space to require one minute for reading.

You pay a newspaper for the privilege to tell its readers why they should buy of you. To be careless in the manner in which you tell your story is to throw away both money and opportunity. It is for this reason that the man who writes his own advertisements is like the layman who handles his own case — he has a fool for a client!

You would laugh at the idea that an amateur photographer of a erage ability could make his own portrait as well as you, with all your experience and equipment. But what difference is there when you attempt to write your own advertisements, instead of going to the man with the equipment and the experience and get him to do it — he who can do it well?

Whatever form of advertising you adopt, don't stop spending money with securing the opportunity — spend a little more to use the chance up to the limit of its possibilities.

Advertising-schemes are without number; but certain ones are more or less standard. Some of these I am going to discuss in detail.

The Booklet

It is probably the most effective shot in your locker, if it is properly made, well loaded, carefully aimed and deftly fired. So many people believe that any advertisement is all advertisement that it is difficult to get credence for the statement that the printed matter is only a part of any campaign for business. Yet if you had a million copies of the finest booklet in the world, descriptive of your work, and sent them all for distribution to Hong-Kong, you would n't expect much in the way of immediate results!

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A booklet should have a purpose. A booklet should have meat in it, a reason for existence, a story to tell. If you have won a prize, a medal or diploma, a little brochure modestly telling about it, the causes which led to the prize being won, and something about the prize-winning picture, is a case in point. If you have a new camera, a new lens, a new method, a new style, a booklet which will attractively portray it to your customers should prove an investment yielding good returns. But a booklet which says merely that your name is Smith, that you make pictures, that your prices are thus-and-so and your address such-and-such, is money wasted. Never use the booklet, which is expensive, when a less expensive form of advertisement will do the work. But *never* issue a *cheap* booklet, unless you do cheap work. To put good advertising on poor paper with poor presswork is to reduce its value fifty per cent, and to advertise refined photographic work of high quality in any but the highest-class manner is to throw coin away.

The Calendar

is sometimes an effective advertisement and sometimes a delusion and a snare. In my humble opinion it is more often the latter than the former, when it comes to the photographic business. Few men would pay any attention to the name and address on the calendar in their offices if their wives wanted a photograph — they are much more likely to credit the last picture they have seen with your name.

But I recall one brillant exception, in which a photographer designed an ingenious calendar and found that it paid. Just before Christmas he advertised that with every order of a dozen prints of a certain popular style he would give a Christmas present. He worded his advertisement so that it seemed rather that he was anxious to enter into the Christmas spirit and give his customers a little gift than as if he were offering a premium. When he came to deliver his gifts the customer received a package neatly done up in tissue paper, tied with red ribbon, stamped with a holly seal — exactly as if it were a genuine Christmas gift from some thoughtful friend. Inside the package was a neat, plain card, on the bottom of which was a small and dainty calendar and on the upper half *a platinum print corresponding to the order supplied.* Above was engraved a tiny card bearing the greeting: "Merry Christmas from me to you!" The inference was irresistible. Besides creating good feeling between the photographer and the customer, the gift was of a nature to be given away again immediately, since no one cares for a calendar adorned with a picture of himself. And the advertising-value came in this way: the clever photographer had permitted himself to place a neatly-embossed card of his own, not too conspicuous, at the lower left corner — "Smith, Portraits. 101 Elm." Besides, he had signed the platinum print, as usual, and his name was printed on the back of the card!

Oh, canny Smith! Something for nothing has ever been a lure. When that something is a good advertisement, and morally certain to be passed on; when it costs little and, in addition to making friends with the person to whom it is

first given, is likely to make a customer of the second, as well as of the various people who are told of the idea, it is certainly one to pay. *That* was advertising with *brains.*

The Street-car Card

can be made of service anywhere, but not unless it is carefully designed, well executed and frequently changed. There is one objection to it for photographers' use: large advertisers can afford to have lithographed and three-color half-tone cards in cars, printing them in huge quantities. *You* cannot. A plain, printed card suffers by comparison, and you can't afford to have your business or your name seem less refined or less successful even than some one's premium ham, another's floating soap, or a third's patent medicine. Better cut out the car cards, unless you feel you can afford a dainty set. Personally, I don't see why you can't afford five hundred cards in sets of fifty, each decorated with a D. O. P. portrait. Ten 4 x 6 portraits, in lots of fifty each from ten negatives, all of pretty girls, daintily-dressed women and babies, and finished, half in black and half in sepia, ought not to be more than two days' work for a small force, and a set of fifty cards in fifty cars, changed weekly, for ten weeks, during the Christmas rush, will bring big results. But be very sure you have permission to use the pictures, or you may run against trouble.

Blotters

are fairly well exploded as advertising-mediums. When an advertising-campaign has so thoroughly covered the territory that all that is necessary is to keep a name before the public, so that the advertising which has been done will not be forgotten, blotters may well serve their turn. The same is true of rulers with names and businesses printed on them, paper-cutters and other advertising-novelties. But as business-getters such articles are generally a failure, particularly when they are aimed at people whose pocket-books must open to some wideness to deal with you.

Follow-up-Letters

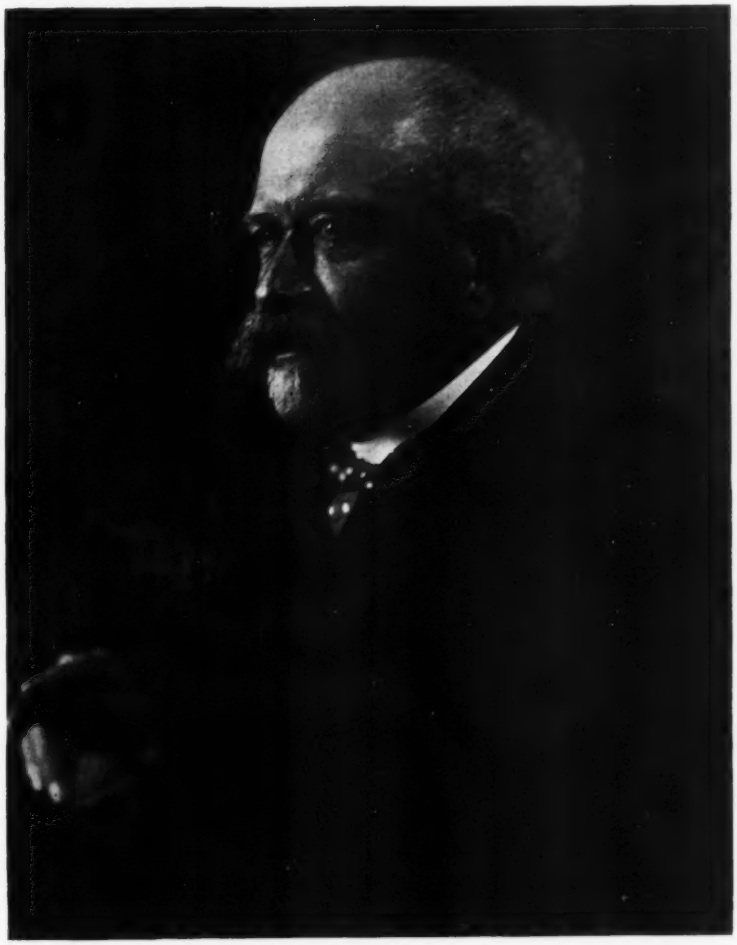
are vitally important to most advertising-campaigns. A really good follow-up-letter is a jewel without price. It is used to go after names secured in some way or other, to produce business which is shy in coming. Different communities demand different methods. Large cities are less fruitful ground for follow-up-letters than small ones, and certain localities will stand a larger number sent after names than others. But your advertising-man must lay out your system for you — every business is a law unto itself in such matters. Alas, however, many a good advertising-man is a failure when it comes to writing follow-up-letters, and does n't know it. Beware, as you would the devil, of a follow-up-letter which reproaches, which complains, which finds fault, which reproves or which makes any accusation. For instance, "We cannot understand why you have not taken advantage of our liberal offer — surely you cannot afford not to have us take

FRASERBURGH SANDS WILLIAM NORRIE

your picture," is going to make the average man say to himself, "Well, I don't care a hang whether you understand it or not!" and throw the letter away!

To say to a prospective customer, *via* form-letter, "We cannot afford to draw your attention again to our offerings at this season," is just throwing space away. To write a man who, you believe, may sometime have his portrait taken by you, "You are neglecting an opportunity to get a rare bargain — don't delay any longer, but let us make an appointment," is so trite and commonplace as to be altogether wide of the mark. One vital mistake you and a thousand others like you make, when it comes to sending out four or five consecutive form-letters at intervals of a week or ten days, is to think that each must contain some reference to the last; that the letters must tell a definite, continued story. Thus, Number 1 tells your name, and business and what you want; Number 2 mentions that Number 1 has been sent, and, "Why don't you take advantage of the chance?" Number 3 says that Numbers 1 and 2 have been sent you and you cannot understand why the recipient has n't come in and spent money; Number 4 ends up with the statement, "We have sent you Numbers 1, 2 and 3 letters, and have had no reply, and now beg for the last time to inform you that Smith's is it when it comes to making pictures!"

This is all wrong. Numbers 1, 2, 3 and 4 should be entirely different letters in form, in tone, in contents and in method. Each should be a shot in itself. If



PETER VAN LITH BY J. C. STRAUSS

Number 1, telling him (the recipient) of new panel platinums at $7.00 per dozen, does n't bring forth a reply, let Number 2 speak of 16 x 20 or 1 x 2 vignettes. If the customer-to-be does n't want either, tempt him with a miniature or an exclusive head. In Number 4 show him where money is to be saved on some style at this time of the year.

Make each letter cheerful. Make each one courteous, each one optimistic. Let nothing go into your letter you would n't let your receptionist say to a customer. Imagine your young lady saying to a man who had spent half an hour

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"EAST IS EAST AND WEST IS WEST"
WILLIAM H. PHILLIPS

READY FOR THE FRAY GEORGE T. POWER

looking over samples and then decided he would call again, "Well, I can't understand why you don't buy. Surely these are cheap enough!" Do you suppose that man would ever come back? Not a bit of it. But if the young lady smiles him out, asks him if she can't show him something else, asks him to come to her for waiting-on when he returns, and makes him feel at home, when he *does* decide he can afford a sitting he is coming where he was well treated. Exactly the same principle holds good with form-letters. You can create either a favorable or an unfavorable impression — you can interest a man in your meth-

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ods or your business or your styles, or all three, or you can antagonize him with your tactless words. Remember always that you are, in a letter, going to say perhaps two hundred words to a man; pick those two hundred with care, and make them breathe not only success and good prices and the picture he must have, but courtesy and good will.

Canvassing

There are photographers who do it. I disappoint one young woman regularly every month. She wanders into my office with samples and a large, red hat, and sits down and endeavors to ingratiate herself with a smile, and tries to look as if she would cry if I decline to order. I always do decline, and she never does cry. I would never think of going to the gallery she represents for photographs. It seems to me that, needing such methods to get work, the work itself cannot be first-class.

To send out agents to solicit by the ticket or coupon-method is precarious business. It is somewhat like purloining a man's watch in a street-car in order to get two years' free board — in State's prison. To promise a house and lot or an automobile or a ninety-seven-piece dinner-set with every dozen pictures is all that is necessary to keep every thinking man and woman in your city away from your doors. But I forget I am talking to respectable photographers!

Miscellaneous Schemes

There are several ways to get publicity, some of which come more under the head of business-getting than simple publicity. Thus, the man who opens a new studio and neglects the opportunity for a reception — well-advertised, with engraved invitations to the best people in his town, and something in the way of a souvenir — is letting a chance slip by. But it takes brains and tact and some social skill. Ill done, it is better left undone. Well done, and it will bring notices in the papers and business will follow.

Invitations to certain people to have their pictures taken free "to complete our gallery of public men" or "to finish our set of prominent society people" sometimes result in orders from the negatives so made. But it always seems a catch-penny scheme — unless, indeed, you are truthful and really do need the pictures to fill out a set from which newspapers and magazines are constantly ordering.

You fight shy of the dentist with the free-sample filling; the drug-store with the free-sample medicine; the doctor with the "thirty-days' free treatment." What guaranty have you that your invitations will not be received in the same spirit? Different localities and circumstances need different methods of treatment from an advertising-standpoint; but human nature is pretty much the same in New York and Kamchatka. It is the general consensus of opinion that any advertising-scheme which has "free" attached to it, as applying to anything else than booklets or advertising-matter, is likely to do more harm than good among the class of people photographers try to reach.

is a scheme with many advantages. To see, "Photo. by Smith-Jones," every day in a newspaper is first-class advertising for you. But it means that you have to go, at any and all hours, anywhere, for any kind of a picture; if your town is large and your papers alive, it means that you have to keep one man busy doing nothing but that. Yet even the salary of one man and the cost of plates and paper he uses do not make an exorbitant sum when you consider the advertising you get in this way. Much more critical attention is paid to pictures illustrating a news-story than to any other single thing in a newspaper. The advertising comes in having your name associated with such pictures. I can recall one firm, now very prominent in photographic circles, which made its reputation and its business largely through this means of advertising.

But whatever scheme or schemes you try, there are certain points to be remembered in connection with all. No advertising of a high-class studio is good advertising unless it is dignified. None is worth considering which may antagonize a possible customer. It 's poor advertising which is iconoclastic. It is n't enough to tell people what a picture ought not to be, and what the other fellow fails to do; you must let your public know what a picture should be, and that you can supply it. Thus, in this advertisement,

DON'T BUY CHEAP PHOTOGRAPHS

CHEAP PHOTOGRAPHS ARE NEVER GOOD PHOTOGRAPHS

Try Ours

SMITH'S

the impression is given that you are an expensive man, and that to be good a photograph must be costly. Compare with this, which expresses the same idea, constructively:

YOU CAN'T BUY SOMETHING FOR NOTHING

But

YOU CAN BUY THE BEST PICTURES FOR A REASONABLE PRICE

At

SMITH'S

Of course, these are mere skeletons — "sketches," the ad. man calls them, containing the germ to be worked out. In this case it is the most obvious of all germs, the price-germ, and was chosen here as being the easiest on which to hang a deadly parallel comparison.

Finally, never forget that advertising is just a talk between you and the man who reads it; never say in advertising what you can't afford to say face to face; and, inasmuch as your space (time) is limited, consider most carefully what you will say and — equally important — how it shall be said.

For so, and so only, shall you find advertising paying you the dividends it pays the man who is master of the subject, or who has the good sense to choose for his advertising-man him whose experience is large and whose success in advertising is measurable in results.

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THE STORM APPROACHES
W. J. STREET

The Gum-Platinum Process

MALCOLM ARBUTHNOT

ALTHOUGH the idea of superimposing an image in pigment on a platinum base was suggested many years ago, yet the process seems to be very little known and, so far as I am aware, used by few. It is, however, probably the finest method of printing a pictorial photograph, containing as it does the best qualities of perhaps the most valuable two processes ever offered by the scientist to the artist; namely, platinum and gum-bichromate.

Possibly some may be prompted to ask why one or other of these printing-mediums is not sufficient for our needs by itself without combination; but when setting out to give the best possible rendering of a subject, it behooves us to use every means at our disposal.

The platinum process, I believe, stands preëminent for the rendering of half-tones and subjects where a general delicacy is the dominating feature, whereas gum-bichromate is chiefly remarkable for the wonderful depth and lusciousness it imparts to the darker portions of a picture.

Theory and Practice

Theoretically, we should therefore strive to obtain a very thin platinum print, in which every gradation in the lighter tones is present, the shadows being produced by coating the finished platinum print with a mixture of gum arabic, potassium bichromate and pigment. However, in practice it will be found that we can depart very considerably from the theory and, in fact, work even in the opposite direction, provided the negative be suitable and the effect desirable.

There is no doubt that for certain subjects a plain platinum print from a good negative will give practically all that could be wished for, and it is equally certain that for others gum-bichromate from even a bad negative will do likewise; but, as every adherent of either process will admit, there is, apart from the limitation of subject, a considerable risk of failure, due to reasons over which we have frequently no control. For instance, platinum prints have a knack of turning out flat and mealy, or the exposure may be so slightly incorrect as to spoil the effect aimed at.

The number of queer things which may happen to gum-prints, when printing for a long range of tone, is almost past belief — so much so that many workers have given up the process in despair. By combining the two processes we are not only enabled to render practically all subjects, but, except from accident or gross carelessness, we need never waste a print. The results will not only have a quality which is unique, but will bear the impress of personal control from start to finish.

In describing the working-details it is, perhaps, unnecessary to remark that it is most essential to have clearly defined the effect which is being aimed at; in fact, as with any other finished picture, this must always be in the mind's eye.

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Consequently, we shall commence by making our negative, so far as possible, according to whether we desire to make most use of the platinum or gum element.

The Gum-Solution and Sensitizer

The gum arabic solution is that in general use; namely, two ounces of best gum arabic in five ounces of water, to which is added a little formaldehyde or carbolic acid as a preservative. This should be strained.

The sensitizer is a saturated solution of potassium, or, better still, ammonium bichromate.

If a number of printings which would involve a great amount of gloss in the shadows are contemplated, it is advisable to dissolve the gum in a four per-cent solution of arrowroot. This, in addition to giving a matt surface, forms a much tougher film, in which, consequently, a larger amount of pigment can be incorporated without danger of its breaking away in patches during development.

Color of Gum-Printing

Those taking up this process for the first time will probably think it essential to match the pigment with the tone of the platinum print, but this is not really necessary. I have produced many prints in a warm sepia color which were commenced with a thin, black platinum print as a base.

Some delightful effects can be obtained by printing in two tones, or by a judicious combination of various pigments and platinum developing-baths, such as the formula devised by Mr. Inston.

As a slight loss of quality in the platinum print is of no consequence when used as a base for gum-printing, it will often be advantageous to develop by the glycerine method, which not only affords a further opportunity to effect alterations, but also reduces the risk of spoiling paper from errors of exposure.

In the case of portraits and figure-studies, some interesting effects can be obtained by developing only a part of the print (such as the face in a portrait), holding back the rest with glycerine.

This undeveloped portion is then replaced by a gum image, which can be worked upon with brushes, etc., thus imparting a delightfully spontaneous and sketchy character, which for some subjects is very pleasing.

Making the Platinum Print and Registering

In commencing to make a gum-platinum print it will first be necessary to devise some method of replacing the print on the negative so as to ensure exact register being obtained. This can be accomplished in several ways, and the use of a drawing-board, instead of a printing-frame, is one of the best, besides having the further advantage of allowing the whole of the print to be examined during exposure.

A piece of stout flannel must be attached to the board, and upon this is laid the platinum paper, sensitive side uppermost. When cutting up the paper, a margin of about an inch larger than the negative must be provided. Pin the paper to the board by the four corners, and in the center place the negative.

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SUNSET, CORONADO BEACH — HAROLD A. TAYLOR

We shall now require some ordinary pins of a fairly stout gauge, and two of these must be driven through the paper into the board, so that they press firmly against the glass on all sides.

A few drawing-pins can be used to ensure contact if desired. This is necessary only if the negative is not a very large one. If a large glass-negative is used, its weight is generally sufficient to keep it in good contact with the paper. Printing should be conducted with the board as nearly horizontal as possible. A good top-light or printing in the open air is advisable.

When it is necessary to examine the print, the negative is removed altogether, and if the pins have been accurately fixed it can be replaced in exact register.

Making the Gum-Print

The platinum print, having been finished and coated with the gum mixture, must again be placed upon the felt-covered board, and it will be necessary only to reinsert the pins into the same holes to ensure the register of the negative.

For small pictures an ordinary printing-frame will suffice, but in this case the subsequent printings must be adjusted by hand, and therefore it will be found advisable to provide registration-marks on the negative.

These can be made either by scratching away a portion of the film at the edge of the plate, or by painting an opaque patch which will have corresponding

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marks on the print. When the print has been thoroughly dried it will be ready for coating with the gum mixture, which should be composed of equal parts of the gum and bichromate solutions previously mentioned.

The Pigment and Exposure

The pigment will be the next consideration, and this can be used either in powder or tube form, my preference being for tubes, lampblack being very useful as a base, which can easily be modified by the addition of other colors.

The amount to be used depends entirely on the portion of the negative we wish to print. Should it be desired to deposit a pigmented image on the lighter tones, a very little color will suffice, whereas for building up the shadows a much larger quantity may be used.

It must not be forgotten, however, that the grain of a gum image depends to a great extent on the amount of pigment in the coating; any excess is liable to give a very coarse grain indeed, so that when printing a shadow-coating the exposure must be carefully watched in order that the thick film does not get deposited on the lighter tones, which would at once show an unpleasant granularity.

The correct amount of pigment can be satisfactorily determined only by experience; but, as a rough guide, I may suggest that for a shadow-coating three quarters of an inch of Reeves' lampblack will be about right for half an ounce of gum and an equal quantity of bichromate; for the half-tones, say half an inch; while a quarter of an inch will be sufficient for the high-lights.

When printing for the shadows it is advisable to use a slightly higher proportion of gum than bichromate, and *vice versa* for the lights. An actinometer of some kind will be required for judging the exposure. Those who are used to gum-printing will have no difficulty in estimating the exposure; but for the benefit of beginners I would mention that a coating in the proportions given for the half-tones would be about the same rapidity as P. O. P.

Development is effected by immersing the print face downwards in cold water for about fifteen minutes, then complete by means of a brush or spray. The tones of the print will be perfectly under control.

A Novel Use of the Alum Bath

Should it be desired entirely to remove a correctly-exposed coating, it is necessary only to soak the print in cold water for about an hour, followed by gentle friction with a soft brush. But if the coating has been over-exposed, then we must have recourse to an alum bath, which must be about five per cent or stronger. The print should be immersed in this face downward for two or three hours, when it will be found to have become quite soluble. This may sound somewhat strange when considering the hardening-properties of alum; but it seems that a solution of alum first softens a gum image (and some other colloids), and exerts its hardening influence only when the print becomes dry. For this reason care must be taken before removing the print from the alum bath to see that pigment remains on the paper only where it is required.—*The Amateur Photographer and Photographic News.*

Talking-Pictures

Synchronism and the Simultaneous Recording and Reproducing Photographically of Sounds and Pictures or Images

ROBERT THORN HAINES, F.R.P.S.

MANY attempts have been made to reproduce the images, pictures or representations of moving-objects, together with the simultaneous sounds produced by or accompanying them, by means of, in some way, connecting an ordinary phonograph or gramophone to a cinematograph; but so far none of those attempts appears to have proved satisfactory. The difficulties attending the accomplishment of any successful result by that means are far greater than would at first thought be expected. The phonograph, and other similar contrivances, as well as the cinematograph, are not perfect, therefore it would be obviously impossible to obtain a satisfactory result by any combination of two imperfect instruments.

The necessity to sing or speak in close proximity to the instrument in order to make a record suitable for reproduction would render it impossible to photograph the picture except as showing the phonograph with the singer near it instead of the correct natural attitude, and for that reason it would be unpracticable. The method usually adopted is first to obtain the record, which is placed in a phonograph connected to the cinematograph, and, while the picture is being taken, the record, which is being produced at a sufficient distance from the singer to be out of view, is repeated by the singer. The synchronizing of a picture and record taken and reproduced in that manner, depending, as it does, upon imperfect human skill and erring judgment, could not possibly result in anything more than a mere approximation.

It is indispensable to a correct reproduction that the simultaneous movements and their accompanying sounds be simultaneously recorded and reproduced in exact synchronism. The waves which constitute the sounds must not suffer any variation, alteration or modification in the process of recording and reproducing, but should be recorded and reproduced in precisely the same form as the originals alone, and without the introduction or accompaniment of any other sound-waves. The pictures must, of course, be in every respect free from the flicker and other defects of ordinary cinematograph pictures.

The phonograph and gramophone are essentially mechanical contrivances, and it is more than could reasonably be expected that all the minute and delicate forms and variations of the sound-waves produced by the rapid vibrations of the diaphragm, actuated by and representing the human voice, could be accurately recorded and reproduced by any mechanical means.

A careful examination and study of those instruments disclose what happens to the waves, and how they suffer considerable distortion and modification by the process in which they are recorded and reproduced. If these sound-

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waves be diagrammatically recorded by such an instrument as the vibrograph or phonautograph, the record thus made would show the true form of the waves. Now if the waves be impressed on a phonograph record and reproduced by the phonograph so as to be recorded on the vibrograph, it will be found, on comparing the two vibrograph-diagrams, that the waves in the diagram which were taken from the phonograph-record have suffered such distortion or modification as not to be recognized. The absence of such delicate curves and wave-modifications as constitute the fine inflections or tones and variations of the human voice, as well as the tones of musical instruments, are due to the emission of insufficient physical energy to actuate a mechanical instrument, like the phonograph or gramophone recorder, with sufficient force to impress or score them accurately and with sufficient rapidity on the more or less hard material of which the records are composed.

In the process of recording, as well as reproducing, the friction caused by the hard pin in contact with the record, and the forcing against the air of the fine shaving which is excavated or scored out when the record is being made, create sound-waves which mingle with the originals, and exercise their influence on them. The material of which the horn or trumpet, employed to amplify the sounds, is constructed, lends its own vibrating tone to them, and further modifies their form. These accompanying sound-waves and modifications are distinctly heard and distinguished from the originals when the record is reproduced.

It is obvious from what has been said, in view of their peculiar inherent nature, that no hope could ever be entertained of entirely eradicating these defects, in the absence of a means for recording wherein no energy is required to record the waves, and no contact or friction takes place between the vibrating medium and the record.

Photography amply satisfies these requirements, and by its aid not only can the sounds be perfectly recorded and reproduced, but absolute synchronism of the sounds and pictures or images constantly maintained. The action of light is sufficiently rapid to record all the delicate variations and forms of the sound-waves, photographically, on the highly-sensitized medium containing the pictures, so that they can be recorded simultaneously on the same medium and therefore not liable to vary in point of time. The form that such a record takes is that of a continuous series of photographic impressions, varying in degree of opacity and transparency, or otherwise varying in size, shape or other essential characteristic, according to the particular form chosen, precisely corresponding with the variations in the form of the sound-waves emanating from, and produced by, the human voice.

The process by which the result is obtained consists in collecting the sound-waves at the place where they originate and conveying them electrically to the recording instrument, where they are utilized to vary a light-source or the rays emanating from it, so as to produce on the sensitized film, side by side with the pictures or images simultaneously taken, a series of photographic impressions of varying opacity and transparency or otherwise of varying form; which, in

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PORTRAIT A. A. BISHOP

P. A. OF N. E. CONVENTION

turn, are caused to vary the rays from a fixed light-source so as correspondingly to vary the resistance of a continuous electric current operating a loud-sounding microphone by which the sounds are reproduced, simultaneously and in exact synchronism with the pictures or images, at the place where they originally emanated from. I conceive other means by which a record can be made without contact or friction, but I am doubtful whether any of such means would be found so practicable as this photographic process has already proved to be.

XUM

The Influence of Aperture

The Case of Large vs. Small Cameras and Lenses Clearly Stated

FRANK H. JEFFREE

THAT the character of the finished photograph is influenced by the aperture used when taking the negative — a large aperture producing a broad effect and a small one fine detail — is well understood, but it may be worth while to inquire more closely into the reasons for this, and try to deduce from them some simple rule which will enable us to obtain with certainty any degree of breadth or detail desired.

In talking of aperture, the F number is so universally quoted that most photographers regard it as the governing factor in producing any particular effect; but a little consideration will show that this cannot be so. For instance, a hand-camera worker, employing an aperture of F/8 on a five-inch lens and working at a fixed focus, has no difficulty in producing a negative sufficiently sharp for lantern-slide work if his subject does not include very near objects in the foreground, the lens rendering foreground, middle distance and distant objects with almost equal sharpness. If, however, he attempts to do the same with a fifteen-inch lens on a 10 x 12 camera, again using F/8, the resulting negative may possibly produce a fine print of the "naturalistic" order, the foreground and distance being softened down to the exclusion of detail; but reduction will fail to produce a lantern-slide comparable in detail with that taken by the five-inch lens.

To understand the reason for the difference, let us consider the circumstances under which the view was seen by the lens in each case. The five-inch lens saw the view from a standpoint defined by the size of its stop, i.e., from a circle $\frac{5}{8}$ of an inch in diameter; while the standpoint of the fifteen-inch lens was a circle 1 $\frac{7}{8}$ inches in diameter, or three times as great as the other. Now we understand that our vision is stereoscopic, in virtue of the fact that our two eyes see the same view from standpoints separated by about $2\frac{1}{4}$ inches, the picture impressed on one eye being out of register with that impressed on the other, with the single exception of the object on which our attention happens to be fixed, the lack of register producing subordination of general detail to the interest in the principal object, and also producing the idea of relative distance.

The fifteen-inch lens is therefore in a similar position to a man having many eyes in a circle $1\frac{7}{8}$ inches in diameter, no two eyes seeing exactly the same picture, but all concurring in concentrating their attention on one object — that on which the photographer has focused; while objects at other distances are represented by more or less overlapping and therefore blurred images, according as they depart from or approximate to the plane of the principal object. Similar reasoning, of course, holds with the five-inch lens, but here the overlapping of images is by comparison only $\frac{1}{3}$ as great, the diffusion-circle having only $\frac{1}{3}$ the diameter of that produced by the fifteen-inch lens.

XUM

HALLOWE'EN

MARY G. HUNTSMAN

Hence it would appear that the factor which counts in determining the character of the picture is not the F number, but the actual diameter of the stop in inches, and that stops of the same diameter will produce similar results whatever the focal-length of the lens.

It must not be thought, however, that in the similar photographs spoken of the diffusion-circles (so frequently, and so erroneously, standardized at $\frac{1}{100}$ of an inch) will be of the same diameters, for similarity must be held to mean having diffusion-circles of the same size only when the prints are enlarged or reduced to the same size, hence the size of the diffusion-circle will vary with the focal-length of the lens, and if we wish to limit ourselves to $\frac{1}{100}$ of an inch with a five-inch lens we should accept $\frac{3}{100}$ of an inch with a fifteen-inch lens. A moment's consideration will show the reasonableness of this; for while we frequently examine a quarter-plate print with a reading-glass to appreciate the finer details, such a method of examination would be quite out of place with a 10 x 12 print; consequently a degree of fuzziness, which is not only tolerated but looked for in the latter, would not be accepted for a moment in the former.

It becomes, then, necessary to establish a new standard for the size of the circle of diffusion. Since a photographic print should never be examined from a closer standpoint than the focal-length of the lens which produced it, it is obviously unnecessary to require greater fineness of detail than could be recognized at that distance. This requirement will be attained with all except the most keen-sighted if we limit the diffusion-circle to $\frac{1}{1000}$ of the focal-length of the lens. This, then, may be taken as the standard of sharpness for high-class technical and record photography. The average photographer, satisfied with moderate sharpness, will range from this figure to about $\frac{1}{500}$ F, while the artistic worker, who subordinates the unimportant planes by rendering them unsharp, will wish to increase the range to perhaps $\frac{1}{250}$ for landscape work and about $\frac{1}{125}$ for genre.

The latter figures represent very distinct fuzziness. We will call this fraction R; i.e., R is the ratio that the diameter of the diffusion-circle bears to the working-focus of the lens producing it.

Then to determine the aperture necessary to produce any desired size of diffusion-circle, the following formulæ hold:

$$\text{(I.)} \quad A = \frac{RDd_1}{d_1 - D}$$

$$\text{or (II.)} \quad A = \frac{RDd_2}{D - d_2}$$

Where A is the aperture of the lens R has the meaning previously assigned to it; D is the distance of the object on which we are focusing; d_1 is the distance of the farthest object included; and d_2 is the distance of the nearest object included, all measurements being in inches.

Equation I., dealing with the diffusion-circles of objects more distant than the plane focused on, is the more important; as in the case of nearer objects,

A HALLOWE'EN DREAM M. A. YAUCK

dealt with in Equation II., a much greater size of diffusion-circle is required before the detail of the object is masked, owing to the large scale in which such objects are represented.

Two general cases of Equation I. may be considered. First, when the subordinate objects are at a considerable distance, which may be taken as approximating to infinity, the equation reduces to the form

$$A = RD$$

Fig. 1, which has been prepared in accordance with this formula, shows graphically the diffusion obtained with any size of aperture up to four inches, with the principal object at any distance up to one hundred feet. Taking, as an example, that we wish to focus on an object situated at fifty feet from the camera, we find that to produce a technically good photograph, in which $R = \frac{1}{1000}$, we must use an aperture of about $\frac{5}{8}$ of an inch, while for a naturalistic effect with $R = \frac{1}{500}$ the aperture is about $1\frac{1}{4}$ inch, and an out-of-focus distance with R about $\frac{1}{250}$ cannot be produced by a less aperture than $2\frac{1}{2}$ inch.

The second general case is when the subordinate objects are at about double the distance of the principal objects, as frequently happens with the backgrounds of figure-subjects. The equation then becomes

$$A = 2RD$$

This is the basis on which Fig. 2 has been prepared. It will be seen that the aperture required for any particular effect in this case is just double that required in the first. All other cases may be approximated with sufficient accuracy for practical purposes from these two, recollecting that the nearer the subordinate

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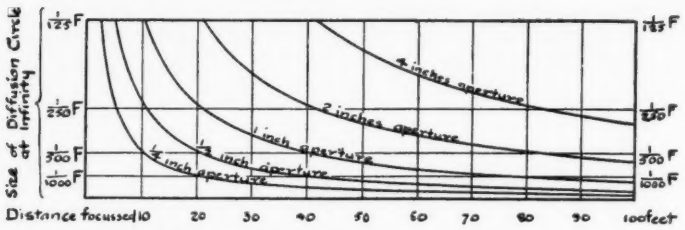

FIGURE 1. DIFFUSION-CIRCLES AT INFINITY

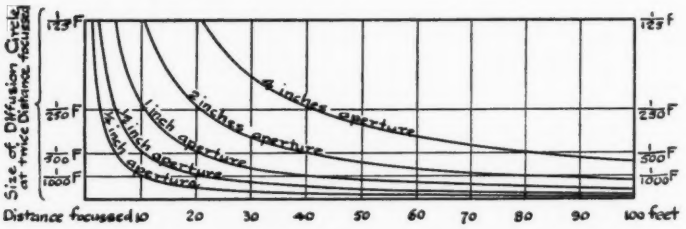
Size of Diffusion Circle at Twice Distance focussed
1/125 F
1/250 F
1/500 F
1/1000 F
4 inches aperture
2 inches aperture
1 inch aperture
½ inch aperture
¼ inch aperture
Distance focussed to 10 20 30 40 50 60 70 80 90 100 feet

FIGURE 2. DIFFUSION-CIRCLES AT TWICE DISTANCE FOCUSSED

objects are to the principal object the smaller the diffusion-circles, while objects at half the distance of the principal object have the same size diffusion-circles as those at infinity.

In conclusion, if a photographer wishes to be able to produce any effect at will, from the broadest to the most detailed, he must not rely on a small camera, which of necessity involves small lenses, as the broad effects in landscape will be found quite beyond its scope. For if we use a quarter-plate camera and a six-inch lens, working at F/6, we are limited to an aperture of one inch as a maximum, and subsequent enlargement will not avail to increase the differentiation of planes. It is true that we can secure any degree of fuzziness by throwing our enlargements out of focus, or by making our contact-prints with a thin celluloid film between the negative and the paper, but then we sacrifice the subtle differentiation of planes, found in the pictures of the best workers, for degradation of definition over the whole print; and though this device has its uses in skilful hands, it is not to be recommended as a substitute for the out-of-focus background, which is so effective in suggesting relative distance and subordinating the unimportant parts of a composition to the object of interest.

The would-be artist would be well advised, therefore, to possess (not necessarily always for use at full aperture) lenses with an aperture of not less than two inches; and though this involves at least a whole-plate camera, and a correspondingly heavy outfit, yet the increased range of effect at his command will fully recompense the earnest worker for the extra trouble and expense.—*The Amateur Photographer and Photographic News.*

THE LAUGHING GIRL
E. O. HOPPÉ

XUM

EDITORIAL

A Legal Copyright

THE desirability of copyrighting choice photographs, particularly those that are issued for purposes of revenue, should engage the attention of every practitioner—professional as well as amateur. The fee is but fifty cents for each subject, and one dollar when a certificate of registration is demanded. The cost is trifling compared to the profit that may be made by the photographer. Of vital importance is the law to be observed. The copyright-notice should appear plainly on *each individual proof and each finished print*, and in such a manner that it cannot be easily removed or obliterated. It must be borne in mind that if the copyright-notice is incomplete it is neither effective nor legal, and the omission of one word is sufficient to destroy its validity.

The following is the correct and legal form of copyright-notice: COPYRIGHT, 1909, BY J. C. STRAUSS, or, COPYRIGHT, 1909, J. C. STRAUSS. If desired, the word "COPYRIGHT" may be abbreviated, thus, "COPR.," or it may be shortened still further; but this minimum contraction of the word involves a variation of the copyright-notice, and on this point the new copyright-law does not seem to be very explicit. It is well, therefore, to avoid any pitfalls and to adopt the one clear course here recommended. However, if one desires to amplify the copyright-notice by appending the name of his place of business, there is no objection.

Many persons imagine that the process of procuring a copyright of a picture is so complicated as to require the services of a lawyer; whereas it may be effected by any person of ordinary intelligence. Application-forms, as well as copies of the new copyright-act — the provisions of which went into effect July 1, 1909 — may be obtained at any large post-office, or upon application to Thorvald Solberg, Register of Copyrights, Washington, D. C. The print in duplicate is sent, with the application-blank filled in and accompanied by a postal money-order for the statutory fee of fifty cents, or one dollar if a certificate of registration is desired, to the Register of Copyrights. Too much stress cannot be laid on the importance that no print nor a proof be at large before application for the copyright is made, or at any time thereafter. If so, such prints are, obviously, at the mercy of any unscrupulous person and the copyright affords no protection whatever to the proprietor of the picture. Many photographers are quite careless in this matter and then wonder why the copyright-law is not a safeguard against piracy. The copyright-notice should not be printed or written upon the print in white ink. This medium is the easiest of all to erase, and does not leave the slightest trace. A good plan is to place the copyright-notice upon the original negative, or, in the case of a few copies being issued, it may be written in ink on each print. In conclusion, it may be well to state that any unwarranted use of the copyright-notice is a punishable offence.

Success of the Guild Pictures

IT is a source of intense gratification to the publisher of this magazine that the successful prints in the Round Robin Guild contests for the year 1908, which are touring the country, have met such uniform favor. Wherever these pictures have been shown they have excited a high degree of admiration and pleasure. Among the many camera clubs which have exhibited this collection is the camera club of Effingham, Ill., in which city the prints were exhibited for several weeks under the direction of Professor David J. Cook, principal of the Illinois College of Photography. Mr. Cook was more than pleased with the high standard of the work shown by the Round Robin Guild as exemplified by this collection, and compared many of the prints to the best modern paintings as regards composition, atmosphere and theme. He also found the mountings extremely artistic and in delightful harmony with the tones of the pictures. Almost every camera club where the collection has been shown has recognized the admirable results attained through these Guild pictures, and their tendency to uplift the photographic art-science. The wish has also been very generally expressed that they be seen by professional photographers, who, in viewing them, might be encouraged in the direction of greater endeavor along artistic lines. There is so much materialism in professional portraiture — that is, of the kind made in the average studio — that practitioners should study nature with their cameras more than they do, and thus be able to instil into their daily work something besides mere outline and prosaic detail.

American Progress in Photographic Science

THE introduction of orthochromatic or color-sensitive plates, by means of which it is possible to obtain, in monochrome, a correct record of the relative brightness of objects, as seen by the eye, marks an epoch of moment in photographic science. An important feature in the practice of orthochromatic photography is the ray-filter or color-screen, the application of which has been but imperfectly understood by the craft. There has been no definite standard of procedure, nor has the practical side of this subject been effectively presented by our investigators, except in connection with color-photography. It is, therefore, gratifying to know that important research-work and development along practical lines in orthochromatic photography are being conducted at the present time. We refer to the labors of R. James Wallace, late director of photophysics of the University of Chicago, and now director of the Cramer Research Laboratory, St. Louis, Missouri. The results of his thorough, brilliant and convincing work were amply illustrated at the Rochester Convention last July, and elicited the unstinted admiration of crowds of interested photographers. In the September issue appeared a *résumé* of some interesting work of a practical character by Mr. Wallace, who will embody the results of his scientific investigations at the Cramer Laboratory in pamphlets to be issued by his firm six times a year. A synopsis of these publications will appear regularly in these pages.

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THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

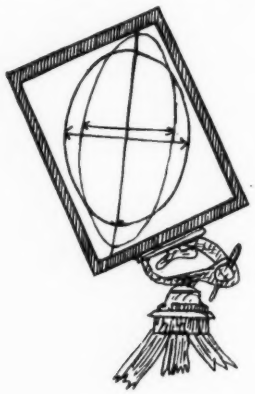
With Reviews of Foreign Progress and Investigation

Conducted by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department Address all such communications to Phil M. Riley, 383 Boylston Street, Boston

Cabinet Ovals on 4 x 5 Plates

In a recent letter Joseph L. Black, M.D., Palatine, Ill., describes his method of making full-size oval portraits on 4 x 5 plates, which may interest other amateurs who desire to economize. A ball-and-socket attachment for the tripod is the only extra required. At least one commercial tripod is provided with such a head, and attachments of this sort may be had which fit any tripod, enabling the camera to be tilted as shown in the diagram.



On the ground-glass focusing-screen are drawn two ovals, one long and narrow, the other shorter and wider. Within the oval chosen the subject is composed. One bisecting-line serves for both, and provides an easy means of telling when the ovals are vertical. The wide oval is more adapted to busts; the narrow one to full-length figures.

A pleasing variation is obtained by turning the instrument so as to bring the oval to a horizontal position, giving the operator a long space in which to compose groups. For decorative landscapes and water-scenes this position is also very effective.

New Toning-Formulæ for Developing-Papers

In a recent issue of *The Amateur Photographer and Photographic News*, C. Winthrope Somerville described three methods of toning bromide or gaslight papers to red, green or blue. The processes are new and possess the advantage that, with the exception of the red, the original image forms part of the tone-color, and by curtailing or prolonging the toning-time the shade of color is controllable at will. The action of the baths is rapid, while the results are permanent

Formula for Red

Make up the following in the order given:

Ammonium carbonate (saturated solution)	1 ounce
Copper sulphate	10 grains
Potassium ferricyanide	25 "

The precipitate which forms when the copper is added to the ammonium carbonate will be redissolved.

Toning should be continued until the shadows are converted. The print is then rinsed for a minute or so and placed in a hypo bath of the following composition for five minutes, and then washed for five minutes:

Hypo	2 ounces
Boric acid	200 grains
Water	10 ounces

Formula for Green

Ferric chloride	1 grain
Oxalic acid (saturated solution)	60 minims
Vanadium chloride (pure)	2 grains
Nitric acid	5 minims
Water to make	½ ounce

Then add, stirring the while:

Potassium ferricyanide	1 grain
Water to make	½ ounce

Tone from one to two minutes; the longer the immersion the lighter the green. Wash ten minutes and immerse in hypo bath given for red tones. Wash five minutes.

Formula for Blue

Ammonia alum (10 per cent solution)	50 minims
Potassium ferricyanide (10 per cent solution)	10 "
Potassium oxalate (10 per cent solution)	30 "
Ammonia iron alum (10 per cent solution)	12.5 "
Hydrochloric acid (10 per cent solution)	2.5 "
Water	1 ounce

Tone until the desired shade is obtained, and wash free from stain. Then immerse in the hypo bath and wash as for green.

Sensitizers for Black and Brown Tones

CAMERISTS who are striving solely for pictorial effect often desire to have their prints on papers of texture unlike any which is obtainable ready-sensitized. Some of our readers may, therefore, be interested in the formulæ below, reprinted in the *British Journal of Photography*, of May 14, 1909, from *Der Photograph*. These sensitizers were devised by Dr. C. Stürenburg, are easy to prepare and use, and the prints require only to be fixed and washed.

"For a paper which shall give a black tone, ten grams of sodium phosphate and twenty grams of gelatine are dissolved in 1,000 ccs. of water. To this warm solution, ten ccs. of a 5% solution of shellac in alcohol are added. The paper to be used is dipped in this warm solution and removed and hung up to dry as soon as the liquid has penetrated it. In place of immersion the solution may be applied with a brush, and the dried paper can be kept for any length of time. In order to sensitize it the following silver bath is prepared:

Silver nitrate	120 grams
Boric acid	10 "
Potassium chlorate	20 "
Water	1,000 ccs.

The paper is floated on this bath for about five minutes and hung up to dry. Printing takes place very quickly, and the prints are then washed and placed in a plain bath of hypo of 10% strength; again washed and dried.

"A second method (for brown-toned prints) is as follows:

Soft gelatine	10 grams
Ammonium chloride	6 "
Sodium carbonate	2 "
Borax	2 "
Sodium phosphate	6 "
Potassium bichromate, 10% solution	3 drops
Water	300 ccs.

The above proportions give a deep brown tone. For a black tone, eight grams of borax should be taken and nine grams of sodium phosphate. For sepia tones the proportions should be fifteen grams of borax and two grams of sodium phosphate.

"This warm solution is applied freely to the paper by means of a brush, the paper being pinned to a board. After drying, the paper is sensitized in:

Silver nitrate	15 grams
Lead nitrate	15 "
Distilled water	240 ccs.

Ammonia is added drop by drop to this bath until a slight permanent precipitate is produced. The bath is then exposed to light until the precipitate has settled, and is then filtered. The paper may be sensitized by liberal application of the solution with a brush. In its sensitive condition the paper will keep a few days. It may be fairly deeply printed, and the prints then given a few minutes in a 3% solution of salt, rinsed and fixed in a hypo solution containing one hundred and eighty grams of hypo per 1,000 ccs. of water. This is followed by the usual washing."

Photographs on Fabrics

INQUIRIES come to us so often for formulæ for sensitizing fabrics that an article on this subject by H. J. Ralli, in *Photography* for May 25, 1909, will be of interest to some of our readers. By employing the methods described, handkerchiefs, sofa-cushions and other fabrics may be decorated with photographs for souvenirs.

"A solution of thirty grains of primuline and twenty grains of common salt dissolved in four fluid ounces of hot distilled water is prepared. The handkerchief, or a corner of it, is soaked in this solution while still hot for about forty seconds. This will dye the material a yellow color — presuming it to have been white or cream-colored in the first place. It must now be rinsed in cold water, and sensitized by immersion for the same period in a solution of five grains of potassium nitrite, using the pure salt in four ounces of distilled water containing two drops of concentrated sulphuric acid. It is best to drop the acid from the end of a glass rod dipped into it, rather than from the bottle, as only a very small quantity is required. This operation, and a subsequent rinsing in cold water, must be conducted in the dark-room, or at least only in very weak daylight; but lamplight or gaslight as in an ordinary room will do no harm.

"When dry, the silk, which is now sensitive to light, is stretched over the back of a new, or at any rate perfectly clean, printing-frame, and is printed from a glass or film positive for from three-quarters to three minutes, according to the intensity of the sunlight. The action must be continued until a portion of the sensitive surface outside the frame has been rendered colorless. Development and fixing will take place together.

"The operator has the choice of several colors for the picture, which may be produced at will by varying the nature of the developer. For red, beta-naphthol is used; for orange, resorcin; for brown, pyrogallol; and for yellow, phenol.

"All these substances may be obtained at any of the large wholesale chemists. The strength of the developer is in all cases the same, being five grains of the solid to four ounces of water; and a few seconds' complete immersion suffices. A final washing in running water completes the operation.

"An interesting modification of the process can be made by printing two or more subjects on the same piece of fabric by masking, and then developing the two pictures by means of a brush, using a different developer in the two cases, so as to get two different colors."

Read and absorb advanced thought. It is to be found in advanced periodicals, and the photographic list is headed by PHOTO-ERA.

XUM

THE ROUND ROBIN GUILD

An Association of Amateur Photographers

Conducted by ELIZABETH FLINT WADE

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography, although advanced camerists are just as welcome and many are numbered among its members. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free and may be obtained by sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston. Send a stamp for complete prospectus.

Preparing Platinum Paper

MANY members of the Guild have asked the editor for a method for sensitizing platinum paper, and to such the reply has been that the description was too long to send either in a letter or to be included in the "Answers to Correspondents" column, and they have been referred to certain books and encyclopedias where formulæ might be found.

During the past month several more of the members have written asking for directions for this process, and also asking explanations more in detail than those given in the encyclopedia. The editor has, therefore, been experimenting a little, and herewith gives the result.

Almost any paper which can be used for other sensitive solutions can be used for the platinum, but the beginner is advised to choose the regular photographic paper, such as the Rives or the Michallet for his first experiments. These papers are practically pure, and for the novice are the best until he becomes skilful with the process of sensitizing the paper.

The paper is first sized, applying two coats and letting the first dry before applying the second. The sizing-solution is made as follows:

Water	30	ounces
Gelatine	150	grains
Alum	90	"
Wood alcohol	7	ounces

Dissolve the gelatine and the alum in part of the water heated to the boiling-point and, when cool, add the wood alcohol. Arrowroot makes a good sizing and has the advantage over gelatine in that the gelatine sometimes leads to the discoloration of the prints. To make the arrowroot sizing, dissolve one-half ounce of arrowroot in cold water, rubbing it to a cream; then add gradually a pint of boiling water, stirring it all the time to prevent it becoming lumpy. If not very smooth strain through cheese-cloth.

The sizing is applied lightly with a wide sable or badger brush. When dry coat the second time, and if the paper is very thin a third coat will be still better.

The sensitizing-bath is composed of two separate solutions which are mixed as they are needed.

Solution A

Ferric oxalate	2	ounces
Water	8	"
Oxalic acid	64	grains

Solution B

Water	1	ounce
Potassium chloroplatinite	75	grains

The solutions for use are mixed as follows: six drams of Solution B, five drams of Solution A and one dram of water. This will give an ounce and one-half of the sensitizing-solution — quite enough to coat several sheets of paper 10 x 12 in size. Potassium chloroplatinite is very expensive, being quoted as sixty cents for a fifteen-grain bottle, so one must learn to use it very economically and never waste it. It takes only a little of the liquid to coat the paper, and is applied with a soft badger brush, flat and rather wide. Work swiftly and use light strokes. The sizing keeps the solution on the surface of the paper and consequently the brushing must not be harsh, as it tends to dissolve the sizing.

The sensitizing-process should be conducted in a room with a dim light, or by gaslight, and the sheets dried as quickly as possible. The faster the drying-process the more even will be the surface of the paper, and the printing-qualities will be better.

FORMULÆ FOR DEVELOPERS

No. 1

Oxalate of potassium	3¼	ounces
Potassium phosphate	1⅞	"
Water	33	"

No. 2

Potassium oxalate (saturated solution)	3	ounces
Water	2	"

A saturated solution of potassium oxalate is made by dissolving one ounce of potassium oxalate in three ounces of water.

Sepia tones on the paper may be obtained by taking three ounces of the saturated solution of potassium oxalate, one ounce of a saturated solution of mercury bichloride, one ounce of water, and twenty grains of common salt. This bath is to be used hot.

In preparing the platinum paper to use with weak negatives the sensitizing-solution should receive the addition of potassium chlorate. To

prepare this take four ounces of Solution A and add to it eight grains of potassium chlorate. Then make up the sensitizing-solution with six drams of Solution B, five drams of the solution containing the potassium chlorate, and one dram of water. The addition of the potassium chlorate is for the purpose of increasing the contrast in the print.

The coating of platinum paper is not a complicated nor an unsatisfactory experiment. If one uses care in first sizing the paper well, then applying the sensitizing-solution lightly so as not to roughen the paper, he will find no trouble in the results. Sensitizing one's own paper is always a very interesting bit of photographic work, and whether it is the simple blue-print, or the elusive gum-print, there is much satisfaction in being able to bring these processes to a successful issue.

After being finished the prints look dull or have a sunken appearance as if they were disappearing through the paper. Brushing them over with artist's fixatif will brighten them without making them glossy. This is a great improvement to prints made from thin or weak negatives.

Paper on which prints are made may be given a soft mellow tone by soaking the print in a strong infusion of tea or coffee freshly made.

The tone of the print may be changed by submitting it to different chemical solutions, and any member desirous to manipulate his prints further will find directions for toning in the November number of PHOTO-ERA for 1908.

Platinum Pointers

DURING the last three or four years many changes have been made in the manipulation of platinum prints. Even the coating of the paper commercially has undergone a decided change.

One of the strict rules of platinum printing was that the paper must be kept as dry as possible during the whole process of printing, and until ready for development. All that is changed, and now there are brands of platinum paper made which are decidedly improved in richness of color and depth of tone by being subjected to moisture for a short time between the printing and the developing. One may therefore use this "damp-day platinum" on days when the regular platinum paper would seriously deteriorate if exposed to the action of the atmosphere.

If using the paper on a dry day, then, after the prints are made, they are subjected to the action of moisture. This may be done by laying the prints before development on a table in a dark-room and leaving them there for a short time. Platinum seems to have a tendency to absorb moisture; and even when the air seems very dry, prints thus exposed will be affected by dampness. A quicker way to subject the prints to moisture is to lay the prints face up on the table and set a pan containing boiling water in the room, which should, of course, not be a very large room. The bathroom may be utilized by turning on the hot water and leaving the prints in the room a short time, the steam imparting the moisture to the paper.

Papers thus treated show a deeper, richer tone if, in addition, they are developed in a developer containing glycerine. The proportion of glycerine is one ounce of glycerine to four ounces of the prepared developer. The glycerine must be thoroughly incorporated with the developer or else the prints have a tendency to streak; but as glycerine readily assimilates with the liquid, there is no danger if one first mixes the solution well.

If the developer is used hot, say of a temperature of 140 or 150 degrees, the results will be still more beautiful in the color of the print. If the shadows appear dull after the print is dried, brush the print over with artists' fixatif, which will not leave any gloss on the print but will bring out the detail in the shadows.

Prints may also be toned by the uranium process, and are entirely different from the toning of prints made on paper which must be kept free from all dampness.

Photography, like all other professions, has its black sheep; but it is noticeable in all that those who promote illegitimate schemes for "raising the wind" soon go up the flue.

Transferring Exposed Plates to a Developing-Tank

[The following article was contributed by Fred Marsch, a member of our Guild. Those who practise tank-development will find the idea well worth trying. Another member has sent a description of his home-made enlarging-apparatus. The picture accompanying it was excellent, beautifully toned and finished. — ED.]

WHEN I began to use a changing-bag for unloading exposed plates into a developing-tank I generally experienced no trouble in getting the first plate safely into the rack, but frequently succeeding plates would be scratched by the sharp edges or corners of those already in place, or those inserted were scratched by plates I was endeavoring to place into adjoining grooves. Other amateurs with whom I discussed the matter had had the same trouble, and one of them finally discarded the changing-bag altogether and returned to the use of the dark-room, so as to have the benefit of the ruby light and be able to see what he was doing. But I welcomed the changing-bag because of the relief it afforded from the many discomforts attaching to even the best of dark-rooms, and determined to overcome the trouble in some way. After a few experiments I hit upon a simple and efficient remedy and, believing that other readers of PHOTO-ERA may have experienced the same difficulty, I submit my plan.

Take large-size writing-paper, or any other paper of good quality, tough and not easily torn,

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and cut six strips half an inch wider than the largest dimension of the plates used, and three times as long as the plates' smallest dimension; that is to say, for 4 x 5 plates, paper 5½ x 12 inches, folded into three equal parts, each section being 5½ by 4 inches, the extra half-inch forming a sort of tab to facilitate its subsequent removal. The six folders are put into the changing-bag together with plate-holders and tank.

When only one plate is to be put into a groove each plate is placed inside one of these folders and both are inserted into the proper groove, the folds of the paper protecting the edges of the plate. As soon as all the plates are placed, the folders are gently removed, by grasping the half-inch tabs which project above the plates, leaving the latter in the rack, which is then deposited within the tank, and the cover put on. The bag may now be opened and everything removed from it.

When twelve plates are to be put into a tank having but six grooves, the procedure is similar, except that two plates, back to back, are placed in each folder.

A variation of the above consists in using only two folders, the first of which is removed after the second plate (or pair of plates) is in place, the second folder being removed after the third plate (or pair of plates) has been inserted, etc.

While I have presented this matter from the view-point of the user of a changing-bag, the method is equally applicable and advantageous in the dark-room. It will positively prevent all scratching or marring of the emulsion on glass-plates during the process of removal from plate-holder to tank, and is so simple that it can be put into practice at once.

Intensifying Negatives

RECENT correspondence has brought many requests for directions for intensifying negatives and prints. There are now on the market a number of preparations for intensifying plates, any one of which will give satisfactory results, the outcome being largely due to the nature of the negative to be intensified. An under-exposed negative can rarely be made into a satisfactory negative, though it may be strengthened in printing-quality. A plate which has been fully exposed and under-developed can, however, be subjected to the redeveloping process, and will repay one for the pains.

The intensifier which is in most general use is mercuric chloride, first bleaching the image in the mercuric chloride solution and then reblackening it in some one of the reagents, such as silver cyanide, ammonium, etc.

Other intensifiers are mercuric iodide, copper bromide, uranium, lead, etc. Mercuric chloride seems to be the favorite, as the method gives much more brilliant negatives than any of the others, so that if one has very weak negatives the choice of an intensifier would fall on the mercuric chloride.

An old and reliable formula is made of ten grains of bichloride of mercury and ten grains of chloride of mercury to every ounce of water. The plate, well washed to free it from all traces of hypo, is placed face up in a tray, covered with the solution and allowed to bleach. If the negative is to be intensified only a little it must be removed from the tray before the image has turned entirely white. If very thin it is left in the solution until it is white when seen by transmitted light.

When the bleaching-process is complete the plate is well washed and then placed in a solution made up of one ounce of ammonia to eight ounces of water. In this solution the negative begins to darken and finally turns black. The depth of color depends on the strength of the ammonia used. It takes from five to ten minutes to bleach a negative, after which it is washed for at least ten minutes, and the blackening-process takes about three minutes.

Another reagent for blackening the image is the metol-quinol developer. After the plate is well washed from the mercuric chloride it is developed for ten minutes in a developer made by the following formula:

Metol	15	grains
Hydroquinone	7½	grains
Sodium carbonate	¼	ounce
Water	10	ounces

Intensifying with iodide of mercury gives clear and delicate detail in the image. Lumière's formula is one of the best:

Mercury iodide	45	grains
Sodium sulphite (dry)	440	"
Water	10	ounces

Carry the intensification to the required density, wash the plate well and place for five minutes in a ten per cent solution of sulphite of soda. If the intensification has made the negative too dense it can be reduced by placing it in a fresh fixing-bath of the strength used for plates — one to four. If left in the bath long enough the intensification may be entirely removed.

Plates that are not properly washed after being intensified have a tendency to fade, or the image will turn yellow. The plate can be restored by soaking it in a solution of Schlippe's salts, made of the strength of ten grains of the salts to an ounce of water. If the bleaching-solution is too strong it is liable to spot the film. Brown stains on the film are due to the negative not having been washed free from hypo before placing it in the bleaching-solution.

Most amateurs know that the quicker a negative is dried after fixing and washing the better will be the density, but many do not know that a plate which lacks density may be helped by soaking it first in tepid water, just enough to soften the film but not loosen it from the support; then, blotting off the superfluous moisture, holding the glass side towards a moderate heat — the heat from a register will be none too strong — and drying the wet film quickly. This will increase the density of the plate considerably.

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The Round Robin Guild Monthly Competitions

Closing the last day of every month.

Address all prints for competition to PHOTO-ERA, *The Round Robin Guild Competition, 383 Boylston Street, Boston.*

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in books, magazines, enlargements, mounts, photographic materials or any article of a photographic or art nature which can be bought for the amount of the price won.

Rules

1. These competitions are free and open to all photographers, whether or not subscribers to PHOTO-ERA.

2. As many prints as desired, in any medium, mounted or unmounted, may be entered, but they must represent the unaided work of the competitor.

3. The right is reserved to withhold from the competitions all prints not up to the PHOTO-ERA standard.

4. *A package of prints will not be considered eligible unless accompanied by return postage at the rate of one cent for each two ounces or fraction.*

5. *Each print entered must bear the maker's name, address, Guild number, the title of the picture and the name of the competition for which it is intended, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing-process.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA. If suitable, they will be reproduced, full credit in each case being given to the maker.

Subjects for Competition

September — "General." Closes October 31.
October — "Vacation-Scenes." Closes November 30.
November — "Glimpses of Foreign Lands." Closes December 31.
December — "Self-Portraits." Closes January 31.

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January — "My Favorite Photograph." Closes February 28.
February — "Decorative Treatment of Trees." Closes March 31.
March — "The Seasons." Closes April 30.
April — "Downhill Perspective." Closes May 31.
May — "Sunlight and Shadow." Closes June 30.
June — "Landscapes with Figures." Closes July 31.
July — "Marines." Closes August 31.
August — "In the Country." Closes September 30.
September — "General." Closes October 31.
October — "Scenic Beauties of America." Closes November 30.
November — "Group Portraits." Closes December 31.
December — "Flashlights." Closes January 31.

Awards — My Favorite Poem

As the editor of PHOTO-ERA, Mr. Wilfred A. French, is in Europe attending the Dresden Exposition, no Guild awards will be made until his return. Soon after the middle of September the entries in this and the "Outdoor Pastimes" competition will have prompt attention, and it is hoped that the awards in both may be announced in the November issue.

The Forthcoming Competition

VACATION-DAYS are over. We have had our holiday, and now we have nothing left of it but the memory of the joyous hours spent by sea or lake side, in the mountains or the valley, sailing on the ocean or trudging along the open road. Yes, we have something besides the cheerful memory — we of the camera craft. We have visible tokens in our photographs of those halcyon hours, counterfeit presentments of the days which have slipped away into the silent past never to return to us again. Where do they really go, the days which bring to us some joy, take from us some treasure? Some day we may find them all again.

One has a glimpse into his past through the medium of his camera, and in that past are always included scenes of special merry-makings, for the camera seems to be the proper adjunct to such events. Especially is this true of our vacation-days, when our camera is the one thing we will not dispense with; and so we have chosen for our October competition, closing November 30, "Vacation Scenes."

A word about what is desired in these pictures. We do not want landscapes. While they may be the scenes on which our eyes have looked, they do not come within the scope of this competition. What we really want are pictures of some actual pleasure in which we participated. We have had picnics, straw-rides, boating-parties, fishing-parties, berry-parties, etc., etc. There have been gala parties on the water when boats decked out with flowers and gay streamers have floated past in festive procession, or there have been boating-parties at night, when the fleet was hung with many lights which were duplicated in the water. Surely none of us neglected such an opportunity for making an attractive picture. Then there are the days at camp, filled with interesting experiences, and there is the

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gipsy fire by the roadside, when we caught and cooked the fish we had just taken from the brook, and roasted the potatoes we had surreptitiously taken from a neighboring field. There is the clambake at the seashore, or the great fire of driftwood on the beach round which we danced the hours of evening away.

Instead of any of these, or kindred pleasures, we may have taken our vacation in some quiet place "far from the madding crowd," where with books and craft work we passed peaceful, restful days. It matters not how we spent our vacation, but we must have of it some pictorial record. The subject is a fruitful one, and we expect a large number of prints.

Now a word as to the making of the prints. First, do not make them on glossy paper. Second, do not send them unmounted. Third, mount them in as artistic a manner as possible, choosing a paper to match the tone or harmonize with the color of the print. Mark the name and title and full address on the reverse of each print. Send in protected wrappings, and you will have done all the necessary preliminaries to ensure a chance of winning a prize.

You'll never see poor work in PHOTO-ERA, *and you'll never see an advertisement in that magazine that the publisher can't endorse.*

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

I. G. LISK.— To copy a negative from a negative, make first a positive on an ordinary plate by contact-printing, then make a second negative from this positive in the same way. Do not varnish your negatives. Very few workers practise varnishing negatives, for the film is now made so hard that there is very little danger of scratching the surface. Then, too, the varnishing is not always a success, and one cannot retouch a varnished plate without removing the varnish.

W. B. TRENT.— Use the very rough platinum or gaslight paper for your portrait and you will get a very fine print. The masses of lights and shadows are too broad to come out well on the smooth paper, but on a rough paper the result would be very artistic; and if you use black and white instead of the sepia the picture will resemble a charcoal drawing. I would keep the same lens which you are now using. It seems to do excellent work, and you might not be so well suited with the other.

MOLLIE F.— The reason of the slanting lines in your pictures of buildings is because your camera is not level. If the camera is tipped up or down the lines will also run in a slanting direction. This is one of the things which all beginners have to learn, and it is not to be wondered at that you had the same trouble. Learn to see your image correctly on the focusing-glass and then you will be sure to get satisfactory results in your pictures.

ALLEN G.— The trouble with your fixing-bath is that it is too weak in hypo. The strength of a fixing-bath should be at least one ounce of hypo to four ounces of water. Do not use the fixing-bath repeatedly. As soon as it begins to discolor throw it away. Hypo is so cheap that one can afford to use a fresh bath with each batch of plates.

NELSON A.— You will find in the August number of PHOTO-ERA answers to your questions in regard to blue-prints. Evidently you did not see the August number or you would have seen this article on the blue-print. Blue-prints are not included in the prints for competition. The blue-print does not reproduce well, hence it is barred from our competitions. The blue-pencil for glass or china will be what you want for retouching your negative from the glass side.

THOMAS C.— To clear the fog or veil which seems to cover your negative make up a saturated solution of hyposulphite of soda, mix it with glycerine in equal proportion, and spread over the negative or lay it in a tray and turn the solution over it. Let it remain for several hours. If very much veiled it will take perhaps twenty-four hours to clean the plate. This solution will clear a very badly veiled negative even if the trouble is of long standing.

BERTHA B.— Large sensitive plates may be cut into smaller sizes, but it is rather a delicate process. Lay the plate face downwards on a perfectly smooth surface; then, with a rule laid in place, run the glass-cutter close to the edge of the rule, bearing on firmly. Bend the glass toward the film first, then backwards, to ensure a clean cut along the film as well as the glass. I would advise you to try to exchange your large plates for smaller ones, rather than to attempt to cut them into smaller sizes.

J. L. R.— Persulphate reducer is used in the proportion of twenty-five grains of the ammonium persulphate to an ounce of water. Place the plate, which has been previously dried, in this solution, and, when sufficiently reduced, place it for fifteen minutes in a ten per cent solution of sulphite of soda. Wash well and dry. The ammonium persulphate attacks the high-lights first, so that this is a specially good reducer for plates which have too much contrast.

CHARLES D.— One of the best formulæ for eikonogen developer is made of one and one-half ounces sulphite of soda in crystals, one-half ounce of hydroquinone, thirty ounces of water. A second solution is made of one ounce of carbonate of soda to ten of water. To mix the developer ready for use, take an ounce of each solution and add to it two ounces of water. This is the proportion in which the developer is used.

Eikonogen gives a negative full of detail, and with soft contrasts. Keep the bottle of eikonogen well stoppered. See answer to D. A. T. in this number.

SARA D.— The negative which makes the most satisfactory enlargements is one which has plenty of detail both in the high-lights and in the shadows, and which has no very marked contrasts. You ought to make a very fine enlargement from the negative, the print of which you enclose.

DAVID C. W.— If you intend to take so large a group by flashlight it would be wiser to have the room itself well lighted by artificial light. This will not only help the shadows, which are apt to be very dense, but will also prevent the staring look in the eyes which is so often a marked feature of flashlight groups. If you use the flash-sheet and interpose a very thin muslin screen between the sitters and the direct light you will get a more satisfactory picture as regards the lighting.

HELEN PRESTON.— Sulphite of soda is used in the developer as a preservative. It oxidizes readily on being exposed to air, as shown by the coating of powder. This should not be put into the developer. Sulphite of soda, as well as being a preservative of the developer, also acts as a restrainer. Sulphite of soda is also used for blackening negatives which have been intensified with bichloride of mercury.

S. O. L.— Adurol costs sixty cents an ounce. It is a very good developing-agent for portrait-work and also for the development of enlargements, for it gives clear whites and deep, rich blacks. It will keep indefinitely, for it does not oxidize readily.

BEN. M. DENT.— You can have a multiplying-attachment fitted to your 8 x 10 camera. This attachment will allow from one to thirty-six exposures to be made. The price would be about twelve or fifteen dollars.

F. T. E.— To harden the film of a plate and make it impervious to heat soak it in a ten per cent solution of formaldehyde. This can be done while the plate is still wet, and then subjecting it to heat to dry it will not soften the film. Use non-halation plates for your interior views where you include windows in the picture. This prevents the fogging of the plate around the windows.

GRACE D. M.— No, it does not make any difference if the pictures which you wish to submit in the competition "Glimpses of Foreign Lands" were taken a year ago. We do not expect our Guilders to go abroad for the express purpose of getting pictures for this competition, but we want the very best and most original picture which the contestant has made.

CARL B.— Do not send unmounted prints to the competitions. They are very apt to be bent or marred in transportation and in the unpacking and handling. Then, too, an unmounted print never stands so good a chance of winning a prize as when it is tastefully and appropriately mounted. Mark each print with full name and address.

KATE RICE.— Use the Virida paper to protect your plate while developing an autochrome. This paper is made expressly for superimposing between the light and the plate, and makes a perfectly safe light. It is not specially bright, but gives sufficient illumination to judge the progress of the development.

H. L. FELTON.— I think the solution to which you refer is called Etchine. This is used for sensitizing postals and paper, and also for silk and linen. The prints are toned in any good gold-toning or platinum bath. The process is very simple, and the results very satisfactory.

F. H. M.— Use a glass funnel instead of tin or granite for filtering your solutions. Tin is not a safe metal to use with photographic solutions, as some of the chemicals act directly on the tin, producing a change in their elements. The glass funnel is not only quite safe, but is very easily cleaned. A new make of funnel has a groove on the side so that the air is expelled while filling the bottle. There is also a very handy piece of apparatus for the dark-room which combines the graduate and funnel, the funnel when inverted making a cover for the graduate. The graduate holds a quart, and the price of the article is fifty cents.

JAMES D.— Photographs such as you enclose find a ready sale in farm papers and in papers which use material for children. One of the members of our Guild sells a great many photographs of children to the Sunday-school papers. They are always in the market for interesting pictures of children. See advertisements in the September PHOTO-ERA.

D. A. T.— The trouble with your developing-solution which has turned dark by standing is that it has oxidized. Some chemicals are very susceptible to oxygen, and unless carefully stoppered will oxidize very quickly. To prevent this, when setting away a solution which must stand for some time, turn paraffin wax over the cork and neck of the bottle and it will seal it effectually.

Print-Criticism

Address all prints for criticism, enclosing return postage at the rate of one cent for each two ounces or fraction thereof, to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing-process.*

"SAILING O'ER SUMMER SEAS," G. F. D.— This print shows a yacht sailing along on smooth waters, and so placed on the plate, and so arranged as to lighting, as to bring the boat directly in the path of light which shines across the water. This leaves the whole of the boat in shadow, so that it is almost like a silhouette against the sky. This is a very interesting bit of composition, and

well balanced. Its great fault is in the mounting. It has been trimmed to a circle, and consequently much that ought to be in the picture is cut off, besides making conflicting lines, the form of the print being at cross-purposes with the lines of the ship and of the far horizon. It is only now and then that a picture will stand being trimmed either in circular or oval form. The composition must conform by curves to the form of the print if one wishes a successful combination.

"Evening," H. L. J.— This picture would not be criticized were it not for the fact that the editor receives many similar subjects. In most of the pictures thus taken the clouds are heavy and black and the high-lights strong, owing to the contrast between the light and the clouds when the camera is pointed directly at the sun. Such pictures should be taken with a large stop, and the focus should not be sharp. It is only occasionally that a good picture of this kind is received. In this particular print there is nothing to help the composition in the way of lines, the camera having been pointed straight at the setting sun and over a perfectly flat landscape. It is the long lines in the landscape which make or mar a picture of this kind.

"A Study in Lines," N. R. E.— This is a very pleasing picture of a girl with her arms full of trailing vines. The hair, which is unbound, hangs in a graceful sweep over one shoulder, while on the opposite side it is massed in the shadow and partly hidden by the leaves of the vine. The drapery is long and very soft, being of some gauzy material in a dark tone. The head is uplifted, making still another line of the throat and neck, and the whole composition is a study in artistic curves, one supplementing the other and completing a charming whole. The criticism of this print — the adverse one — is the manner of printing and mounting. The print is on a half glacé paper in brown tones, and the mount is a dull gray. Printed on rough paper and mounted on a paper of similar tone to the print it would be an admirable piece of work.

"In the Forest," C. N. B.— This picture might also bear the title "A Study in Lines," though the lines are in a direction directly opposed to the picture on which comments have just been made. It is a study in tree-trunks, and is specially well done. It shows the growth of great trees up to where they begin to branch, while in the distance the upper part of trees are seen as well. This picture is specially to be commended for its lighting. The shadow is on the side of the tree next to the spectator, and consequently the trunks of the trees have roundness — something which is lacking when the trees are flatly lighted. This print would bear trimming about an inch at the left, thus bringing the principal objects into more harmonious positions.

Plate Speeds for Exposure-Guide on Opposite Page

Class 1/2

Lumière Sigma
Lumière Non-Halation Sigma

Class 1

Ansco Film, N. C. and Vidil
Cramer Crown
Cramer Crown Non-Halation
Cramer Instantaneous Iso
Cramer Inst. Iso Non-Halation
Cramer Isonon
Cramer Trichromatic
Defender King
Defender Ortho Inst.
Eastman N. C. Film
Ensign Film
Hammer Special Extra Fast
Imperial Special Sensitive
Imperial Orthochrome Special Sensitive
Kodoid
Magnet
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular

Class 1 1/4

Cramer Banner X
Cramer Banner X Non-Halation
Eastman Extra Rapid
Hammer Extra Fast
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2

Lumière Ortho A
Lumière Ortho B
Lumière Panchro C

Class 2

Cramer Medium Iso
Cramer Medium Iso Non-Halation

Class 2 1/2

Cramer Anchor
Hammer Fast
Seed 23

Class 4

Stanley Commercial

Class 5

Cramer Commercial
Defender Non-Halation Plain
Defender Non-Halation Ortho
Defender Ortho Slow
Hammer Slow
Hammer Slow Ortho

Class 8

Cramer Slow Iso
Cramer Slow Iso Non-Halation

Class 12

Defender Queen
Seed Process

Class 100

Lumière Autochrome
Lumière Red Label Slow

The Round Robin Guild Exposure-Guide For October

COMPILED BY PHIL M. RILEY

UNDER this caption a brief table of exposures will be given in each issue for the guidance of Guild members during the following month. While the figures are indicative only, they will be found approximately accurate for the assumed conditions they have been applied to. If the exposure-times given are not considered imperative, but as suggestions, possibly to be varied slightly at the discretion of the worker, these tables will prove of great benefit to all who use them.

The table below gives the exposures required by the different subjects and plates mentioned during the month of October on any fine day at noon, when the sun is shining brightly and the lens is working at f/8, or U. S. No. 4.

Double the exposure if the sun is obscured but the light is fairly bright, or if f/11, U. S. No. 8, is used; also between 9 and 10 A.M. and 2 and 3 P.M. Treble it when the light is rather dull. Increase it four times when there are heavy clouds and very dull light, or if f/16, U. S. No. 16, is used. For f/5.6, U. S. No. 2, give half. At 11 A.M. and 1 P.M. increase the exposure one-fourth. From 10 to 11 A.M. and 1 to 2 P.M. increase it one-half. From 8 to 9 A.M. and 3 to 4 P.M. increase it five times.

SUBJECTS	PLATES (List on Opposite Page)											
	Class ½	Class 1	Class 1¼	Class 1½	Class 2	Class 2½	Class 4	Class 5	Class 6	Class 8	Class 12	Class 100
Studies of sky and fleecy clouds	1/800	1/400	1/320	1/256	1/200	1/160	1/100	1/80	1/64	1/50	1/32	1/4
Open views of sea and sky; very distant landscapes; studies of rather heavy clouds	1/400	1/200	1/160	1/128	1/100	1/80	1/50	1/40	1/32	1/25	1/16	1/2
Open landscapes without foreground; open beach, harbor and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds	1/200	1/100	1/80	1/64	1/50	1/40	1/25	1/20	1/16	1/12	1/8	1
Average landscapes with light foreground; river-scenes; figure-studies in the open; light-colored buildings and monuments; wet street-scenes	1/100	1/50	1/40	1/32	1/25	1/20	1/12	1/10	1/8	1/6	1/4	2
Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides, well-lighted street scenes; persons, animals and moving-objects at least thirty feet away	1/50	1/25	1/20	1/16	1/12	1/10	1/6	1/5	1/4	1/3	1/2	4
Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red brick buildings and other dark objects; groups outdoors	1/25	1/12	1/10	1/8	1/6	1/5	1/3	2/5	1/2	2/3	1	8
Portraits outdoors in the shade; very dark near objects	1/12	1/6	1/5	1/4	1/3	2/5	2/3	4/5	1	1 1/3	2	16
Badly-lighted river-banks, ravines, glades and under the trees	1/6	1/3	2/5	1/2	2/3	4/5	1 1/3	1 3/5	2	2 2/3	4	32
Average indoor portraits in well-lighted room, light surroundings, big window and white reflector	1/2	1	1 1/5	1 1/2	2	2 2/5	4	4 4/5	6	8	12	96

In order to make the exposures as accurate as possible after the final multiplications, all fractions accompanying whole numbers have been allowed to remain in this table, except when the whole numbers were so large that fractions might be disregarded as negligible. In such cases approximate figures have been given. Shutters will not always give the exact exposure required, but the nearest speed may be used if it is approximately correct. When the nearest speed is too short open the diaphragm a little; when too long, close it a little. Let the exposure be a little too long rather than too short, and the more contrast there is in the subject the more it may be over-timed. Over-exposure, unless excessive, can be controlled in development, but under-exposure will not give a satisfactory negative.

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OUR ILLUSTRATIONS

CHARLES K. ARCHER has given us a timely and pleasing frontispiece in "The Arbor." The effect of sunlight through the vines, on the dress and particularly on the sleeve, is especially pleasing. The composition is extremely symmetrical, due to the straight vertical and horizontal lines, yet it is not displeasing. Data: 3 P.M.; bright sunlight; 3¼ x 4¼ camera; R. R. lens, 5½-inch focus, f/8; Ideal ray-filter; Orthonon plate; 1 second exposure; Metol developer; Velox enlargement.

"Fraserburgh Sands" is another of our collection of sea-and-sky studies in which William Norrie delights and succeeds so well. It is his aim to record the more unusual of the beautiful effects of nature, and the present example is one of his best. Here is found an obviously logical reason for the brightness of the water, and a convincing example of the value of a low horizon-line in conveying the idea of distance. The curve of the water-line is grace itself. No data are available.

"Peter von Lith" is one of the many superb speaking likenesses in which J. C. Strauss may justly take pride. Mr. Strauss is eminently successful in making his patrons forget his lens, thereby securing characteristic attitudes and honest good nature. No data are available.

Kipling's words and a happy chance gave to William H. Phillips the inspiration to photograph "East is East and West is West." Here the Orient compares notes with the Occident, and certainly the onlooker is given food for thought. Although purely a snapshot, a good genre group is the result. Data: June; early afternoon; bright sun; 3¼ x 4¼ Kodak; Goerz lens, 4½-inch focus, U. S. stop 4; $\frac{1}{5}$ second exposure; Kodak film; Rodinal developer; Royal Velox enlargement.

George T. Power's "Ready for the Fray" is excellent, well lighted and well spaced. The hands are an important feature, and it is unfortunate that there is not even a suggestion of a little finger on the left hand. But for this the portrait would be almost perfect. As a type the boy has the appearance of being of too studious a nature to enjoy our great college game. Data: November, 2 P.M.; north window, cloudy day; 5 x 7 Century camera; Plastigmat lens, 9¼-inch focus, f/6.8; 4 seconds' exposure; Seed N. H. Ortho plate; metol-hydro developer; platinum print.

Sea and sky, but particularly the latter, are the theme of "The Storm Approaches," by W. J. Street. Seldom have we seen great majestic thunder-heads so well rendered as in the present instance. The dark smoke is effective against the lighter background, and the ferry furnishes a touch of life which, in contrast with the clouds, symbolizing the might of the elements, causes the thinking person to realize how small is man, after all. No data are available.

Harold A. Taylor's "Sunset, Coronado Beach," like Mr. Street's marine, is an example of beauties on the Pacific coast. Here, however, little is suggested other than the glories which the eye can see. The composition is rather solid and symmetrical, but this is not at all out of harmony with the thoughts usually associated with the vast and majestic Pacific. Data: late afternoon; U. S. stop 16, $\frac{1}{25}$ second exposure; Orthonon plates; pyro-metol developer; Royal Velox print.

The success of A. A. Bishop, of Newport, Vt., at the New England Convention at Boston, in August, was phenomenal. Both the Grand Portrait award and the first prize in the Regular Portrait Class, as well as the second in the Genre Class, were won by him. We reproduce in this issue one of the best of his successful prints. It is straight photographic portraiture of the best sort, depending for its success upon no dodges or subterfuges of any kind. It is thoroughly artistic, and at the same time the sort of portrait the average person likes to have. Data: November; subdued light; Darlot lens, stop f/30; 6 seconds' exposure; Standard plate 8 x 10; pyro developer; Angelo sepia platinum print.

"Hallowe'en," by Mary G. Huntsman, is a distinctly pleasing autumn genre, the delightful firelight effect combined with a considerable amount of detail and softness on the shadow side having probably been the result of a combined flashlight and daylight exposure. Data: 3 P.M.; flashlight; B. & L. lens, 10-inch focus, stop U. S. 4; Seed 27 plate; eiko-hydro developer; Angelo sepia platinum print.

A pretty little story is told by Mr. M. A. Yauch's "A Hallowe'en Dream," which is spontaneous and true to life. A little trimming on the bottom and right side would give variety of spacing and take the figure from its present rather central position. No data are available.

"The Laughing Girl," by E. O. Hoppé, is one of the comparatively few attractive things of its kind. Very often the photograph of a person laughing is far from pleasing, but such is not the case here. The picture has something of the "bigness" seen in much of the work by Mr. Hoppé, while the slight backward tilt of the head, enhanced by the hat, tends to increase the effect of merriment. Data: 11 A.M.; good light; Dallmeyer lens, f/8; 3 seconds' exposure; Imperial plate; pyro-soda developer; albumen print.

You will find the stones you have thrown at others to-day in your pillow to-night.

PHOTOGRAPHIC PATENTS

Abstracted by PHIL M. RILEY

Printed copies of patents are furnished by the United States Patent Office for five cents each
Address The Commissioner of Patents, Washington, D. C.

July 6, 1909, continued

926,970. COMBINED MOVING-PICTURE TAKING AND PROJECTING-APPARATUS. ROBERT L. WATKINS and ROBERT HEAD, New York City.

A device for taking a series of pictures through a microscope, and also for projecting them upon a screen after the manner of a kinetoscope.

927,063. MAGAZINE PLATE-HOLDER FOR CAMERAS. E. L. C. MORSE, Chicago, Ill.

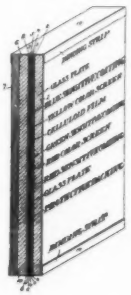
A device which admits of the insertion and consecutive exposure of a relatively large number of plates, and their transference to a storage compartment after use.

927,116. METHOD OF PRODUCING PHOTOGRAPHIC REPRESENTATIONS OF STRUCTURAL DESIGNS. CHARLES CLEMENTS, Boston, Mass.

This patent covers a method of producing representations of structural designs intended to convey to the average mind an adequate idea of the texture, grain or other superficial characteristics of the materials to be used in the finished structure. It consists in drawing the design as usual, pasting over the various surfaces represented photographs cut to proper size and representing the natural appearance of the material to be used in the finished structure, and finally photographing the composite surface so formed.

927,244. FILM-PACK FOR THREE-COLOR PHOTOGRAPHY. FREDERICK E. IVES, Weehawken, N. J.

This invention provides a means for producing the three negatives required in three-color photography by one exposure in an ordinary camera. To one side of a glass plate 1 is applied a film 2, preferably of bromide of silver in gelatine with exceptionally fine grain and transparency, and sensitive chiefly to the blue-violet and ultra-violet rays. This plate is to be placed in the camera with its uncoated face toward the objective. As it absorbs most of those rays to which it is sensitive, it serves as a color-screen for the succeeding element, a green-sensitive film; but as the absorption may not be perfect for this purpose, it is necessary to flow over the face of the blue-sensitive film an alcoholic solution of a water-soluble yellow dye of suitable shade and intensity to make the combined absorption act as a suitable screen for the green-sensitive film. The evaporation, or drying off, of the alcohol leaves a superficial color-film 3 all on the surface, and not diffused into the gelatine film, and of such exceeding tenuity as to add practically nothing to the material thickness of the sensitive plate or number of reflecting surfaces. The second element is thin celluloid or collodion 4 coated with the green-sensitive, bromide of silver and gelatine, film 5 coated with the film side away from the film on the first plate. The third element is a plate 6 of glass coated with a red-sensitive gelatine bromide film 8, and the plate 6 is backed with a sheet 7 of black paper impervious to light. This plate 6 with its sensitive film 8 is first coated with an alcoholic solution of a water-soluble red or orange dye to supplement the absorption of the blue-sensitive and green-sensitive films and thereby constitute a suitable screen for securing a correct record of the red color, the evaporation of the alcohol leaving, as in the case of the blue-sensitive plate, practically no added thickness to the plate or the number of reflecting surfaces. The plate 6 with its sensitive film 8 and coated with the film 9 is placed with its sensitive film 8 against the green-sensitive film 5. The three sensitive surfaces are then practically in material contact, being held perfectly flat by the glass plates, which also protect them from injury and exposure to the air. The edges are finally bound with a strip of paper after the manner of the lantern-slide. After exposure the elements of the pack can be readily



separated one from another by cutting the binding-strips, and the separated films can be developed, fixed and washed in the usual way, in order to obtain the three negatives required for carrying out the various three-color processes, the water-soluble alcohol screen and the red-sensitive and blue-sensitive plates being removed by the dissolving action of the liquids to which the plates are subjected in performing these operations.

July 13, 1909

927,875. KINETOSCOPE. ALVA C. ROEBUCK, Chicago, Ill.

An improvement in the construction of a kinetoscope described in a prior application, serial No. 425,094. The object is to provide an arrangement in which the two continuously-running feeding or loop-forming sprocket-drums have a vertical, shiftable relation to the main drum, and in unison with the intermittent feeding sprocket-drum, so as to ensure a more uniform length of the loops in the film and thus contribute to the steadiness of the pictures as projected on the screen, and at the same time retain the advantage of holding the kinetoscope-shutter in fixed relation to the light-aperture of the apparatus.

927,897. CAMERA. ASA W. STRAIGHT, Chicago, Ill.

A device for using small plates loaded into small holders of proper size, in large cameras, thus avoiding the weight of extra camera-backs or holder-kits. All that is required to

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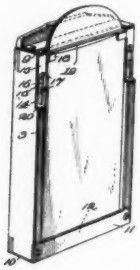
carry out the invention is a thin frame of wood or metal provided with a central light-opening the same size as the plate to be used, and which is placed in the front of the camera-back to furnish a bearing for the plate-holder. Two small rods across the frame of the focusing-screen are necessary to prevent breakage of the glass by spring-pressure with the small plate-holder.

928,379. ADAPTER FOR PHOTOGRAPHIC FILM-PACKS. HARRY M. R. GLOVER, Rochester, N. Y.

A simple holder for using film-packs with plate-cameras, comprising one member, having no movable parts other



than the slides of the locking-means for holding the package of films in place. No hinged plate or other backing for holding the film-package is required, as in previous adapters of this sort.

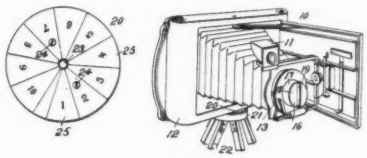
July 20, 1909

928,443. CONTINUOUS-FILM KINETOSCOPE. CHARLES B. GILLESPIE, Ridgeville Corners, O.

This type of apparatus, described in patent 921,537, enables the film to be drawn from the interior or middle convolution of the film-roll to the take-up reel, so that rewinding is unnecessary. The object of the present invention is to so construct the film-reel that it may be employed alternately to feed and take up the film; also to so construct the improved reel that the whole film, excepting a few feet, is enclosed in a fire-proof magazine transferable with the reel proper, so that the danger and delay incident to removing the reel from one magazine and inserting it in another are avoided.

928,724. METHOD AND MEANS OF MAKING PANORAMIC PHOTOGRAPHS. EDWARD N. WHITE, Holquin, Cuba.

By means of a slotted cap over the lens and a dial on the tripod-head panoramic pictures are possible with any ordinary film-camera by making successive exposures so blended together that no line of distinction is visible. The slotted cap cuts off a part of each exposure at each end as the camera is moved into its successive positions, so as to decrease gradually from a full exposure to nothing at each end. Each picture or exposure is made to overlap the next preceding one at its ends, and the overlapping portion of one exposure is such that it will compensate for the lack of exposure of the next one, so that when two succeeding exposures have taken place the results of the two exposures at the overlapping portion are completely blended or merged one into the other, and the succeeding views or exposures will make a single and continuous photograph. Means are provided whereby the camera may be moved a proper distance, so that succeeding pictures will overlap the desired extent. This consists of a dial 20 on the head of the tripod,



and is provided with a series of divisions which may be numbered consecutively and which are made to correspond to the distance the film is to be moved after each exposure.

928,804. SAFETY SHUTTER FOR MOVING-PICTURE LANTERNS. WM. N. SELIG. Assignor to Selig Polyscope Co., Chicago, Ill.

A safety shutter working by gravity which can be closed in a fraction of a second in case of emergency by pressing a release-lever, thus cutting off the light and avoiding ignition of the film if its movement has been stopped through an accident.

928,914. FLEXIBLE PHOTOGRAPHIC PLATE OR FILM. MAX HANSEN, Paris, France.

A pliable photographic plate or film consisting of a basis of transparent flexible material supporting a sensitive medium and a hyalin layer interposed between the basis and the sensitive medium of such thickness as to cause shadows arising in printing-out, owing to the structure of the basis, to be effectually diffused by dispersion of light.

July 27, 1909

929,195. PHOTOGRAPHIC PRINTING-CABINET. ORTHO C. CORTRIGHT and ALBERT D. MIKA, Fort Madison, Ia.

A cabinet provided with light-excluding doors and means for holding and adjusting a negative in proper position. The apparatus facilitates the use of a web of sensitive paper, so that several prints may be made upon it readily. Vignetters may be used, and the closing of the printing-frame automatically exposes the paper through the negative.

August 3, 1909

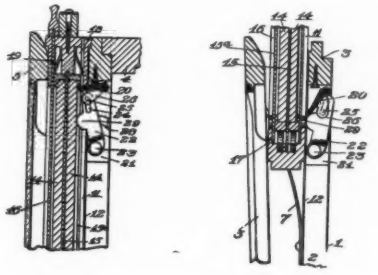
929,648. CAMERA. F. A. ANTHONY, Hackensack, N. J.

A device for making four or more exposures on one plate or film. It consists of a box divided into the required number of compartments, with an exposure-opening in the front of each. The lens and shutter are mounted on a circular revolving disk outside the camera, the lens being so located that as the disk revolves the lens will register with the several exposure-openings in succession.

929,671. CAMERA-BACK. TRUMAN W. INGERSOLL, St. Paul, Minn. Assignor to Eastman Kodak Co., Rochester, N. Y.

A device on the camera-back giving additional safety against the light-striking of plates or cut films. It is adapted to styles of plate-holders now in general use, thus obviating the necessity of suppying a special type of holder in order to take advantage of the improvement. Before the plate-holder is inserted and the frames 1 and 5 on the back are in contact, the flap 20 is moved by its springs rearwardly be-

y ond the rear surface of the frame 1 to seal and close the joint between the frames at the point of insertion of the holder. Upon inserting the holder, and by slightly separating the frames, the advancing edge displaces the flap which yields inwardly, as shown in the right-hand figure, and then subsequently moves outwardly to project within the plate-holder-frame and into engagement with the shutter 16. When the shutter is being withdrawn just before exposure the flap engages it throughout its length, while after the shutter is entirely removed from the holder the flap operates instantly to close the opening 15a in the latter. Upon again inserting the shutter after exposure it is convenient for the operator first to insert the corner of the shutter as a means for guiding it as a whole within the narrow opening, but it not infrequently occurs that the flap 19 is displaced in this way before the body of the shutter has filled the opening,



thus admitting light to the plate; but in the present construction this risk is obviated, as the flap 20 on the camera-back is still in a position to close the opening and the two are displaced successively, so that one or the other is at all times performing its functions.

929,678. APPARATUS FOR EXHIBITING MOVING-PICTURES. Joseph E. Lockwood, Detroit, Mich.

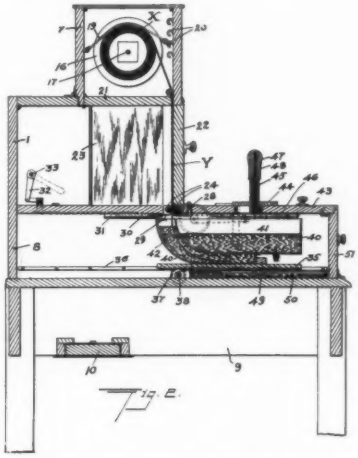
A compact coin-in-the-slot mechanism for automatically exhibiting moving-pictures by electric motive power. The cabinet is relatively small, and at the same time relatively large pictures are shown, with means to guard against ignition of the film by heat from the lamp.

929,743. KINETOSCOPE. Earle M. Wooden, New York City.

This invention relates to the movement of the film, the improvement consisting of mechanism whereby the dwell is relatively longer and the period of movement of the film relatively shorter than is now possible, so that the flicker of the images on the screen shall not be appreciable. At the same time, provision is made whereby it is impossible to skip or overthrow, and each picture on the film, therefore, receives its proper exposure on the screen.

929,757. PHOTOPLANOGRAPH. Calvin J. Ellis, Omaha, Neb. Assignor to the Cameragraph Co., of Arizona.

The purpose of this device is to make photographic copies of plans, legal documents and the like. It consists of a copying-camera and easel for holding the copy, as well as an angle-mirror back of the lens to reverse the image right for left, so that the photographic copy will be in a normal or positive position rather reversed or negative. These features are well understood. The novelty consists of a means for exposing and developing prints which is shown in the rear sectional drawing. The sensitive paper is fed from a roll X through the chamber below where it is exposed at Y, the image being reflected from the lens by the mirror 23. After exposure the feed-crank outside the machine pushes the paper edgewise down into the developing-pan 42. When the developing-time has elapsed the table 35 is racked to the left,



thus drawing the print into the fixing-pan 41, where the print is cut off from the strip by the knives 28 and 29, actuated by a lever on the outside of the casing. Pressure on the handle 47 lowers the immersing-frame 46 to cover the print in the fixing-bath. When several prints have been made the cabinet is opened and the prints removed for washing.

929,807–9 inclusive. COMBINED PORTABLE PHOTOGRAPHIC APPARATUS AND DARK-ROOM. John B. Willyerd, St. Louis, Mo.

This compact apparatus is particularly adapted for making negatives, developing and fixing, and then printing pictures from the negatives upon sensitized sheets or cards which, in turn, are developed and fixed in the same solutions.

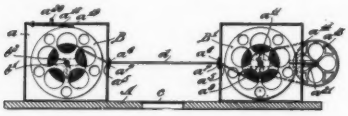
929,987. DEVICE FOR TIMING PHOTO-PRINTING. Richard E. Scharz, Oakland, Cal.

A compact printing-meter to be attached to the edge of a printing-frame. It consists of a graduated pattern-plate having a scale of varying densities, which fits into a metal holder having a spring-actuated back which holds a sheet of sensitive paper in contact with the pattern-plate. The number of sections of this plate which print through indicates the time of printing for the negative proper.

930,037. SAFETY APPLIANCE FOR REELING MOVING-PICTURE FILMS. Nathaniel H. Brown. Assignor to Williams, Brown & Earle, Philadelphia, Penn.

This invention consists of two housings enclosing film-reels. The film in passing from one to the other crosses a

glass plate C in the base, below which is a strong light. Thus, the operator in rewinding films to be used again in the magazine of a moving-picture machine may examine the film to



correct inequalities, ragged edges and repair breaks. The source of light being at some distance from the film and with the glass plate C interposed, there is no danger of fire.

August 10, 1909

930,378. PHOTOGRAPHING-MACHINE. FRANK M. HOLMES, New York City.

A compact apparatus for taking original photographs or copies of other pictures, and developing and fixing them ready for delivery. The sensitive plate is located and all the operations are conducted by simple mechanical means

930,578. COMPOUND FOR THE TREATMENT OF PHOTOGRAPHIC PRINTS. CHARLES B. WAITE, Mexico City.

The compound consists of a solution containing potassium cyanide, one ounce; ammonia (28%), ten drams; borax, twenty grains; carbolic acid, three drams, in ten ounces of water. The preparation is applied to the prints with a tuft of cotton, after which they are again placed in the fixing-bath and thoroughly washed. Yellow or brownish stains are in this way removed, and the color of prints which are too dark is also reduced.

930,621. PACKING FOR LIGHT-SENSITIVE LAYER-CARRIERS. JOSEPH SCHMÜCK, Steglitz, Germany. Assignor to the firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, Germany.

The film is indicated on the drawing by a, the light-tight envelope by b and the closing-member by c. The closing-member c squeezes with its front-edges the open end of the light-tight envelope b and also grips the film a. When

arranging the parts the closing-member c is first firmly pressed onto the edge of the film a, the free edges of the closing-member not being subjected to any pressure, so that the open end of the envelope b may be pushed between the free edges of the closing-member. As soon as this is done the free edges of the closing-member c are also subjected to pressure, sufficiently forcible to assure a light-tight closing-joint and at the same time allow the withdrawal of the envelope from the closing-member.

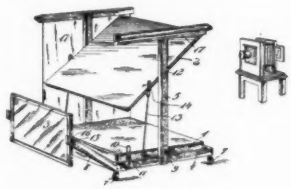
930,654. PRINT-WASHING MACHINE. FRANK W. EMERSON, Providence, R. I. Assignor to Emerson Supply Co., Providence, R. I.

This machine is intended for washing large blue-prints and the like taken from plans and tracings. It consists of a polysided prism-shaped drum mounted on a central shaft to be rotated in suitable bearings and supported in a frame, the lower portion of the drum being immersed in a bath of water retained in a suitable tank for the purpose of washing the chemicals from the face of the print as the drum is rotated therein. A sprinkler-pipe extends along the length of one side. Here the water enters and is sprayed upon the entire width of the print, escaping through outlet-pipes in the bottom of the tank.

August 17, 1909

931,050. PHOTOGRAPHIC APPLIANCE. GASSNER F. FRALEY, New York City.

The parts of this device are so constructed and arranged that objects of various shapes and sizes may be presented in the proper relationship to one another and in the same focal plane. By its use the photographs taken will not be distorted and the lighting may be adjusted to produce the



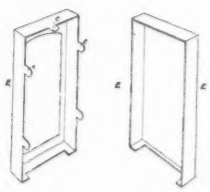
best effects Both the base 1 and the mirror 2 are pivoted and may be adjusted into the desired angular relationship and locked by the bolts 14, so that the adjustment remains the same as the parts are tilted into their different positions. 3 is a pivotally-supported prism-reflector, so that the light is reflected in right lines from it onto the articles to be photographed. Curtain 17 may be raised or lowered to modify the light.

931,485. AUTOMATIC PHOTOGRAPHING-MACHINE. JOSEPH F. RADERS, New York City.

An electrical apparatus of the coin-controlled class for producing photographs automatically. A sensitized plate is delivered from a magazine, exposed, developed, fixed, washed and then passed to the exterior of the apparatus.

931,525. DAYLIGHT-LOADING PHOTOGRAPHIC FILM-PACK. JOHN E. THORNTON, Altringham, England.

A simplified film-pack which cheapens the cost of manufacture and avoids much handling of the films in packing. Its chief advantage, however, is the ease with which the two sections of the case may be opened and closed again as



frequently as desired for the removal of films to be developed before the contents of the whole pack is used. The case consists of two parts as shown, one having bent-over flanges e of metal to hold the other part within it. These flanges can be bent and rebent without breaking.

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Boston Camera Club

THE contest of last year proved so successful that the club has determined to hold a second exhibition in the fall of 1909, open to amateur photographers residing within a radius of fifty miles of Boston.

There is no limitation to the subjects to be offered, and any amateur photographer living within the radius mentioned may enter one or more specimens of his work, subject to conditions which will follow.

The following prizes are offered for this contest: first prize, Silver Shield; second prize, Bronze Shield.

Following are the conditions:

1. All photographs submitted must have been made from negatives exposed since Jan. 1, 1909, and may be in any medium except blue-prints.

2. Photographs sent in for exhibition may be either framed or mounted without glass, but if passe-partout mounting is used the rings on the back must be fastened through the board and not glued to the surface.

3. All photographs should be securely packed and addressed: "Exhibition Committee, Boston Camera Club, 50 Bromfield St., Boston, Mass." If sent by express the charges must be prepaid. All prize-winners shall become the property of the Boston Camera Club. The club will not be responsible for loss or damage of prints. Prints will not be returned unless return charges are enclosed with the exhibit. The name and address of exhibitor must be placed on the back of each mount. The club shall be at liberty to allow reproduction of any accepted print in articles in newspapers and magazines relating to the exhibition, unless special directions to the contrary are given.

4. All photographs intended for this contest must be in the hands of the Exhibition Committee of the club on or before Nov. 1, 1909.

Exhibition Committee.— Phineas Hubbard, A. E. Fowler, Gurdon R. Fisher, Phil M. Riley, C. Peabody, F. R. Fraprie, S. H. Wing, James Dana.

Any further information can be obtained by addressing the secretary, John H. Thurston, 50 Bromfield St., Boston, Mass.

Darkness and Dawn

THE PHOTOGRAPHER (in despair, taking a colored group): "I can't possibly get sufficient light in my studio today to do justice to your family-group, Mr. Lamblack."

MR. LAMBLACK: "Can't? Why, your contemp'ries always uses flashlights when we sits fo' photos!"— *Puck.*

Pittsburgh Academy of Science and Art

THE Photographic Section of the Academy of Science and Art of Pittsburgh held its annual election on May 11, 1909, at which the following officers were chosen for the ensuing year: George B. Parker, president; R. D. Bruce, vice-president; J. M. Conner, secretary-treasurer; O. C. Reiter, lantern-slide director; H. F. Walbridge, print director.

During the past year several instructive and entertaining talks and demonstrations were given by members before the Section. On May 25, 1909, Mr. J. F. Haworth, M.E., delivered a very enjoyable lecture on "Aerial Photography with a Kite-Sustained Camera." Mr. Haworth illustrated his lecture with about fifty slides from negatives made by him from kites flown in the vicinity of Pittsburgh.

Mr. Max V. Straub gave a very profitable talk on "Autochromes" on June 8, 1909, and exhibited interesting examples of the work.

Arrangements are being made for several demonstrations and talks during the coming year. Among the subjects treated will be: a talk on "Lenses," by Dr. John A. Brashear, the lens-maker and astronomer; "Bromide Enlarging," by R. D. Bruce; "Photo-Micrography," by Mr. Frank L. Miller, one of the newer members of the Section. Mr. Miller has made a special study of this branch of photography. He will illustrate his subject with fifty slides.

Other special talks and demonstrations will be given during the coming year.

The Worcester Exhibition

THE Worcester Art Museum announces its Sixth Annual Exhibition of photographs, to be held from October 30 to November 29. Photographers, professional and amateur, are invited to participate, with the understanding that only work which gives evidence of artistic feeling will be accepted. All prints must be submitted to the jury, and not more than ten prints will be accepted from one exhibitor, whether or not more have been passed by the jury. No work entered at the first five photographic exhibitions, or which has been publicly exhibited in Worcester, will be eligible, as it is desired that this exhibition shall represent the work of the current year. Every photograph must be the individual work of the exhibitor. Enlargements will be accepted, provided the work is done by the maker of the negative. It is intended that all the work in making the finished prints shall be the individual work of the exhibitor. Entries must be mounted, and may be framed and glazed. The

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title and name and address of the sender must be written plainly on the back of each print. Pictures will be returned as soon after the close of the exhibition as possible, and in the same manner as sent to it, unless there be instructions to the contrary. All entries must be delivered at the Worcester Art Museum on or before October 19. Entry-blanks, which may be procured from the Museum management, must be filled out and mailed on or before October 16. The jury of admission will consist of Austin S. Garver, Frederick S. Pratt, Dwight A. Davis, Dr. William C. Stevens, Jeanie Lea Southwick, Frank J. Darrah, Joseph H. Greenwood and Charles H. Lincoln.

Hearn Not a Contestant

IN our account of the New England Convention in last month's issue we were in error in stating that the fine examples of portraiture shown by Charles Wesley Hearn, of Boston, were entered for competition. Instead, they were exhibited complimentary to the convention, Mr. Hearn having responded to the call of the association in his usual generous manner.

Women Photographers Organize

To the women of the profession:

The movement towards uniting the women photographers of the country, which began in a modest way at the Detroit Convention in 1908, has resulted this year, at the National Assembly at Rochester, in the formation of a Section for the purpose of advancing their art. "In union there is strength," and a good fellowship among co-workers is sure to prove of benefit to all.

The following officers were elected: president, Mary Carnell, 1314 Chestnut St., Philadelphia; vice-president, Belle Johnson, Monroe City, Mo.; secretary and treasurer, M. Estelle Jenkins, Chicago. Chairman Eastern Section, Gertrude Käsebier, 315 Fifth Ave., New York City; chairman Middle Section, Katherine Jamison, Centre and Highland Ave., Pittsburg, Penn.; chairman Western Section, Iola White, Kansas City, Mo.

Those who did not participate in the proceedings at the National Convention are herewith heartily invited to join the federation, which has already representatives in nearly every State in the Union. It is hoped that each woman photographer in America will promptly communicate with the chairman of her Section, or with the secretary, M. Estelle Jenkins, 115 N. Park Ave., Austin Station, Chicago, Ill., that she may be informed of the full purpose and plans of the association. Cordially yours,

MARY CARNELL, *President.*

August 23, 1909.

An Effective Pose

PHOTOGRAPHER (to nephew, who is being taken together with his rich uncle): "I would suggest that you place your right hand affectionately on the shoulder of your uncle."

UNCLE (to his spendthrift nephew): "Rather put your hand in my pocket; that would be a more natural pose."— *Fliegende Blaetter.*

LONDON LETTER

By E. O. HOPPÉ, F.R.P.S.

THE SALON SELECTING-COMMITTEE

To those who had to smart under last year's treatment of their pictures submitted to the "London Salon" it will be of considerable interest to know the names of the Selecting-Committee this year. There is, at the moment of writing, an openly-expressed feeling throughout this country that their names should be made public, and I believe that this is going to be done shortly before the exhibition will open. Five names out of the eight on the list, I am informed, are the same as last year; viz., Craig Annan, Benington, Arbuthnot, Davison and Craigie (the honorable secretary), though the last named had no hand last year in the actual selection. The three vacancies made by the defection of the American Links have been filled by Evans, Dudley Johnson and Mortimer. The name of Evans is a guaranty for a sound artistic judgment and good taste, together with an absence of faddism. The last two are newly made Links (1908) and have therefore not served on the Selecting-Committee before. Their addition is a distinct gain.

NEW R. P. S. REGULATIONS

The honorary distinction of Fellow of the Royal Photographic Society has not in the past been as widely available as many could have wished, so the Council of the Society has drawn up some new regulations which should have the effect of admitting to the honor of the Fellowship men of distinction who have in various ways, directly or indirectly, advanced the cause of photography. Any one applying must be a member of the Society. The new regulations read as follows: "Each applicant must submit a statement of his qualifications under one or more of the following heads: (*a*) original investigations, improvements or inventions adding to photographic knowledge either in theory or practice; (*b*) educational work, e. g., writing, teaching, etc.; (*c*) technical work, e.g., the application of photography in the various arts and sciences and in record work of all kinds, process work, reproductions of all kinds, etc.; (*d*) pictorial work; (*e*) professional portraiture; (*f*) other qualifications." The application should be supported by as much evidence as possible, such as copies of published papers, examples of work, etc., and by particulars of examinations passed or of any honors gained, etc. While it is desirable that in some ways the honorary title of F. R. P. S. should be made more difficult of attainment, it is to be hoped that the new regulations will enlarge the number of distinguished men who can apply for the distinction.

THE CANTERBURY CONVENTION

The Photographic Convention of the United Kingdom (to give it its full title) held its annual meetings at Canterbury during July. Mr.

Snowden Ward made an admirable chairman, and his address on "Art and Photography" proved both interesting and instructive, as also did Captain Wheeler's on "Telephotography." The outings were as delightful as the weather would allow, and certainly excellently chosen both for the pictorial and the topographical workers. The great desideratum was fine weather; and though it cannot be said that the weather was bad enough to mar the Convention, it did its best to do so. Scarborough is the center selected for next year, and it certainly promises to be an admirable place of meeting, as well as a good starting-place from which to reach a large and important area full of ecclesiastical, legendary, and historical interest.

PHOSPHATE PAPERS IN ENGLAND

Considering that the phosphate printing-process has been known for a very long time, it is somewhat surprising that examples of it have not been placed commercially upon the English market till quite recently. Messrs. Houghton, Ltd., set the ball rolling a few months ago, when they brought out their "Ensyna" paper, and for some months they had the field to themselves; but the Paget Prize Plate Co. has followed suit within the last few days, with its "phosphate" paper, and we hear that other brands are shortly to be expected on the market. Phosphate paper has one or two marked differences from its rivals. It is very soluble in hypo and, consequently, very rapidly fixed, one minute sufficing for complete fixation and five minutes for complete washing. Another advantage is the fine range of tones easily procurable. The color is practically determined by the length of the exposure without alteration of the developer; for while the shorter exposures give a fine black-and-white print, the longer ones give a rich brown and onwards to a fine purple, the latter tones being similar to those obtained in a toned P. O. P.; it is consequently admirably suited to press-work. But the chief attraction of the phosphate paper lies in the rapidity with which these tones can be obtained, an exposure of one to five seconds being all that is needed for full exposure in daylight, while a few seconds by incandescent gaslight will also suffice. There is no chemical reason why these papers should not be as permanent as P. O. P.; in fact, the chemist would probably back the phosphate against the P. O. P., so that with all these advantages one is safe in predicting a big run on them during the next few months, and their final acceptance as one of the regular printing-media of the photographic world.

THE NEW HOME OF THE R. P. S.

The Royal Photographic Society announces that the new house at 35 Russell Square is now ready for the reception of its members; and though some of the workrooms may still be somewhat unfinished, no great difficulties will be experienced. Locker-rooms are plentiful, and there are improved regulations for their management. It is gratifying that the work has been done so expeditiously and the life of the society so little interrupted by so great a change, and that the winter session will begin without let or hindrance. Great praise is due to the official staff for their excellent arrangements and wonderful expedition.

FRAUDULENT PHOTOGRAPHIC PRINTS

I am not aware whether the tricks of the (lower-class) trade are the same in America as they are here, but we have just had a case, decided in a police-court, of considerable interest to the public who buy photographic prints. It seems that a certain photographer, guided by a firm's price-list, ordered some "carbon" prints. On delivery he was doubtful about them and applied a chemical test, sending some to friends for them to do the same. The prints failed under the test and turned out to be only P. O. Ps. The photographer apologized for the "mistake," paid the fine and all expenses. No doubt the public in this country is extensively victimized in this way, and receives P. O. P. prints and bromides as carbons and platinums; not only getting a less expensive but a less lasting print than has been paid for. The moral seems to be: if you are a photographer, test your prints yourself when the professional sends them home, if he be a doubtful personage; if you are not, get a photographic expert to do the work for you and, in the case of fraud, insist on your apology and your compensation. You will get them both without going to law.

RECORD AND SURVEY WORK

This branch of photography is becoming more popular in this country, and certain of the societies are making it an encouraged and recognized branch of their members' work, a class being provided for it at the annual exhibition. Only recently one of the great London public libraries enlisted the assistance of the local photographic society and by its aid opened a free photographic exhibition for the district, which was visited by thousands of people; and the Record and Survey Section was by no means the least popular of the exhibits. There are several societies in the metropolis devoted entirely to the studying and photographing of the memorials that London still possesses of the times gone by, while Sir Benj. Stone worthily acts as president to the National Photographic Record Association, which has a magnificent collection of records photographic. The L. C. C. has its Record Committee, and much photographic and scale drawing-work carefully stored for public reference.

In the Studio

PHOTOGRAPHER (to a very pretty customer): "Now let us have a very pleasant expression. That's it — one, two, three, done! You may now resume your ordinary expression!"

It matters not whether others believe in us; but whether or not we believe in ourselves is of the utmost importance.

XUM

Steamed Bromides

THOSE who use bromide paper will, doubtless, at some time or other have felt disappointment at the difference in appearance of their prints in the wash-water and after drying. The finished picture often has a dead, lusterless appearance far different from the deep, luscious, well-gradated shadows and delicate half-tones. J. M. Sellors, writing in "The American Annual of Photography," suggests as a remedy that the prints be steamed. Says Mr. Sellors, "This gives a depth and transparency which approximate very closely to that of the wet print, and, as far as I have experienced, can be obtained in no other way. No special apparatus is required, the ordinary domestic kettle being all that is necessary. When the water is boiling hard, and a strong jet of steam is issuing from the spout, the surface of the print is brought to within about an inch of the spout and moved about fairly quickly until the steam has acted over the entire surface.

"On examining the print it will be found to have a semi-glossy appearance. As a rule the one steaming will be sufficient; but if in a minute or two the effect partially disappears, a second application of steam should be given. The steam should on no account be allowed to play on any one point for more than a second or so, as there is a danger of entirely melting the gelatine film.

"Unless one has the cuticle of a rhinoceros and the feelings of a bronze statue it is not advisable to hold the print up to the steam with the hand, but to pin it by the four corners to a board and hold that up, as the impinging of a jet of live steam on the fingers for the fraction of a second will cause a sensation the reverse of pleasant.

"Considerable care should be taken not to oversteam prints that have been toned, as repeated applications of steam will affect the color."

Soft Enlargements from Harsh Negatives

IN *The Amateur Photographer and Photographic News* H. M. Kellam emphasizes the fact, already known by many, that bolting-silk may be used to advantage in toning down chalky high-lights and introducing additional half-tones when making bromide enlargements from harsh negatives. The exposure must be increased about one third when the silk is used. If the mesh is not objectionable in the print the silk may be allowed to remain stationary in front of the paper during the whole time of exposure, or half of the time; but the utmost softening-effect is secured by moving the silk-frame slightly during the whole exposure, which permits no trace of the pattern of the silk to print.

Pancro C Plates with the Autochrome Screen

MALCOLM D. MILLER, M.D., reports that during the summer he has made a series of careful comparative tests to determine the speed of the Pancro C plate. He finds that, in order to obtain fully timed negatives, one must give three times the exposure required for the same subject under the same conditions as with standard fast plates such as Lumière Blue Label or Cramer Crown; for example, in June, at 12 M., bright sun, on an average landscape, $\frac{1}{10}$ second exposure at f/11. The autochrome screen used with the Pancro C plates requires a factor of 8. A smaller factor can hardly be used, and a larger one results in no distinct benefit. A good basis for calculation is a standard minimum exposure of one second at f/16. The developers used in these tests were dianol, glycin, metol and edinol.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

Society or Title	*Date*	*Entries Close*	*Particulars of*
Boston Camera Club Boston, Mass.		Nov. 1	John Thurston, Sec'y, 50 Bromfield St., Boston, Mass.
Nebraska Photographers' Association Lincoln, Neb.	Oct. 12 to Oct. 15		F. E. Taylor, Sec'y, Broken Bow, Neb.
Photographers' Association of Kansas Kansas City, Kan.	Sept. 28 to Sept. 30		Max Wolf, Sec'y, Manhattan, Kan.
Photographers' Association of Texas Dallas, Tex.	Oct. 19 to Oct. 21		F. M. Boyd, Sec'y, Gainesville, Tex.
Photographic Salon London, England	Sept. 10 to Oct. 23	Aug. 26	
Royal Photographic Society London, England	Sept. 23 to Oct. 30		
Sixth American Photographic Salon Toledo, O.		Oct. 1	C. C. Taylor, Sec'y, 3236 Cambridge Ave., Toledo, O.
Worcester Art Museum Worcester, Mass.	Oct. 30 to Nov. 29	Oct. 19	Philip J. Grentner, Director, Worcester, Mass.

XUM

WITH THE TRADE

True Panchromatic Plates

THE new Spectrum and Spectrum Process plates recently placed upon the market by the G. Cramer Dry-Plate Co. mark a distinct progress in orthochromatics. Without losing the advantages accruing to ordinary Isochromatic plates, the new Spectrum plates possess a high sensitiveness to the spectral red, which enables them to record the B line (6,870) with ease, while with slightly increased exposure they extend beyond 7,000. This result has hitherto been unattainable except with plates specially bathed. The Spectrum plate is very rapid, being about the same speed as Cramer's Trichromatic, and is well adapted for use by those working the indirect method in tricolor reproduction.

The Spectrum Process is (as its name implies) particularly designed for direct tricolor work; i.e., where the primary color-sensation negatives are obtained directly through the ruled screen. This latter plate is the result of extended experimental work, and combines fineness of grain with extreme density. The film is thin, and the plate works clean, so that the result is a firm dot with close approach to wet-plate quality, the transparent spaces between the dots representing almost clear glass. When used with the red filter (blue plate) the exposure-time is very considerably reduced. It need not be more than pointed out that this increased extent of sensitiveness means better rendition of the dark reds, less time in the reëtching and consequently reduced cost of production.

For the photo-engraver who is not engaged in tricolor work, but who has the innumerable troubles attendant upon the reproduction in black and white of originals showing color, these plates will prove a boon; used in conjunction with Cramer's Contrast-filters, described in the September PHOTO-ERA, they enable the operator to reproduce any color with maximum or minimum contrast, as desired.

Ansco Goods Popular

JUST as we go to press comes the announcement that the St. Louis branch of the Ansco Company at 407 North Broadway has been considerably enlarged in order to carry a larger stock, the better to care for the growing demand for this line of goods. Future purchasers in this section will receive even better service than hitherto.

The same conditions exist at the Minneapolis branch, which has just been moved to larger quarters at 14 Fifth St., South.

However good you may be, your neighbor is just as good and probably better.

Print Portfolios

THE attention of our readers is invited to the attractive line of portfolios in leather, cloth and fancy papers manufactured by E. B. Michelman, 106 Sixth Ave., New York City. The professional will find them an inexpensive means of delivering his goods in a distinctive way; the amateur, an attractive holder for a collection of prints to be presented to a friend. Mr. Michelman's line also includes large portfolios and albums for studio and home collections. Prices furnished on request.

Quality Water-Colors

No one can afford to waste time experimenting with water-colors which are but partly transparent, which deposit grit on the print, which harden, and will not dissolve or will not blend. Peerless Japanese Transparent Water-Colors, manufactured by the Japanese Water-Color Co., of New York, may be depended upon to be free from all these defects, and the convenience of the leaflet form in which they are prepared is worth knowing about. See the special trial offer in the advertising-pages. The manufacturers conduct a picture-coloring department for the trade, and those amateurs who do not care to do their own work.

Kodak Contest

THIS is the last call for the $2,000 Kodak Advertising Contest, closing October 1. If you are not familiar with the particulars, consult the nearest Kodak dealer and send your prints at once. Substantial cash prizes are waiting for the right sort of photographs — pictures which will induce sales of cameras and accessories pertaining to the Kodak idea.

A Well-earned Tribute

THERE is scarcely a camerist who is not grateful to the originator of the most perfect of compact photographic chemicals on the market — the Burroughs Wellcome Tabloids. They are recognized the world over as standard, not only as regards purity and immediate and unfailing efficiency, but compactness and keeping-properties. These greatly-desired qualities never fluctuate, but are constant, one batch of Tabloids being exactly as good as another. Hence Tabloids are enjoying a world-wide popularity, and are rapidly displacing other, similar and familiar old-time preparations, whether in liquid or powder form. Every reader of PHOTO-ERA should secure a copy of "Photographic Facts and Fallacies," mailed free on request. It is intensely practical, being the result of long experience and scientific research in the interests of photography crystallized.

XUM

Why Not Expose Correctly?

As the autumn months march on apace the waning light makes the problem of correct exposure more difficult. An expenditure of fifty cents for Steadman's Aaba Exposure-Scale will stop the waste of plates, however. It is a compact little celluloid tablet for the pocket, ensuring perfect negatives in the hands of any beginner, whatever the subject, weather, plate or film used may be. Since correct exposure is the whole backbone of photography, this scale is worth many times its cost to any camerist. Note Mr. Steadman's Home-Portrait Specialties in the advertising pages.

Binghamton Has a New Industry

GROUND was broken recently at Binghamton, N. Y., for a new factory for the manufacture of photographic specialties by the Bingham Company. Mr. Frank R. Wyckoff, who is at the head of the organization, is a member of the Publicity Committee of the Chamber of Commerce, and one of the most persistent promoters of Binghamton in the city, having been the leading spirit in several other successful enterprises. The new building, though it will be small at first, is to be so constructed that additions can be made easily, and it is expected that it will be necessary to enlarge the plant soon.

American Exposition at Berlin

IN our last issue we called attention to the advantages to manufacturers of photographic specialties in participating in the American Exposition at Berlin, Germany, during April, May and June, 1910. Photographic interest is even greater in Europe than in America, and the results of American ingenuity are sure to receive a warm welcome there.

As stated last month, the Exposition aims to bring together in a magnificent Exposition Palace — much larger than Madison Square Garden, New York — in the commercial heart of Europe, a representative collection of the best that American ingenuity, skill and experience can produce, thereby fostering and strengthening our trade relations with Germany and increasing American exports generally. It will be a unique enterprise, also, in that it will be an Exposition without extras, all incidentals being included in the space-rental.

Since last month there have been several important developments. Prince Henry of Prussia has accepted the Honorary Presidency of the Exposition, and heads a German committee, consisting throughout of men of the very highest standing in the Empire, who will coöperate with the regular German Advisory Committee in making this Exposition successful. J. Pierpont Morgan and Thomas A. Edison have joined the Honorary American Committee. The Hamburg-American and the North-German Lloyd Lines have increased their original freight reduction from 20 to 30%. Arrangements have been made whereby exhibitors who do not intend to send a man of their own to Berlin can have their exhibits unpacked, installed and demonstrated, for a moderate charge, by a special Sales Office and Bureau of Information established in the Exposition Palace; so that it will be necessary for them only to ship the goods to New York to be taken entire care of from there on by the Exposition Management, Max Vieweger, American Manager, Hudson Terminal Buildings, New York City.

Stereoscopic Work Simplified

A VERY clever device, recently perfected, is clamped on the lens-board of the ordinary camera, and enables the user to make excellent stereoscopic views without having to transpose the pictures, as is necessary with the regulation stereoscopic camera. This attachment, being very low in price, should do much toward reviving interest in the stereoscope, as the comparatively high cost of a special camera for making these views, together with the additional work necessary, has prevented many from indulging in this delightful pastime. The Ingento Stereoscopic Attachment brings them within reach of every amateur. Burke & James, Chicago, will send a folder on application, with a reproduced specimen view.

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices.

THE PHOTOGRAPHIC ANNUAL 1909. Incorporating "Figures, Facts and Formulæ of Photography." Fifth edition extended, largely rewritten and revised to June, 1909. Edited by H. Snowden Ward. 287 pages. Paper covers, 50 cents, postage 8 cents; cloth, $1.00, postage 10 cents. Tennant & Ward, New York.

No articles or miscellaneous illustrations are offered in this handy volume. Its contents consist of figures, facts, formulæ, tables and working-methods of the utmost practical value, covering the whole field of photography. In this respect it occupies a unique place among the photographic year-books. As the information is classified and arranged in sections under different branches of work, so the photographer can find at once any item desired, a complete and convenient reference-book is thus afforded. As an example, the section dealing with developers gives over one hundred selected formulæ for plates, films and papers, including those endorsed for special brands of goods and those used by prominent workers. There has been need of such a volume for a long time, and the hearty welcome given to the first edition published last year will unquestionably be extended to the second volume. About two-thirds of the text in the present issue is new or revised, and the cloth edition is interleaved with writing-paper for notes.